

**EPA Registration Number 87290-64**

# PROCESSING REQUEST

Reg # 87290-64

Decision 522346

Description: Updates Basic CSF dated 09/29/2016

Electronic Label & Letter  
(see PPLS):

OR

Non Electronic  
Label & Letter  
(Scanning required):

☐ Dated:

☐ Dated:

\*\*\*Only one label type should be selected\*\*\*

Other Materials Sent (see jacket):

☒ New CSF(s)

☐ Other:

File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring it down to the (ISC). For further information please call 703-605-0716.

Reviewer: Craig Reeves

Division: RD/FB

Phone: 703 347-0486

Date: 10/26/2016



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

October 25, 2016

Michael Kellogg  
Agent for Willowood, LLC  
c/o Pyxis Regulatory Consulting, Inc.  
4110 136th St. Ct. NW  
Gig Harbor, WA 98332

Subject: CSF Notification per PRN 98-10: Updates Basic CSF dated 09/29/2016  
Product Name: Willowood Pyrac 2EC  
EPA Registration Number: 87290-64  
Application Date: September 29, 2016  
Decision Number: 522346

Dear Mr. Kellogg:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the actions requested fall within the scope of PRN 98-10. The CSF submitted with your application has been stamped "Notification" and placed in our files.

Please note that the record for this product currently contains the following CSF:

- Basic CSF dated 09/29/2016

Any CSFs other than those listed above are superseded/no longer valid.

If you have any questions, please contact Tony Kish by phone at 703 308-9443, or via email at [kish.tony@epa.gov](mailto:kish.tony@epa.gov); or Craig Reeves by phone at 703 347-0486, or via email at [reeves.craig@epa.gov](mailto:reeves.craig@epa.gov)

Sincerely,

A handwritten signature in black ink, appearing to read "Tony Kish".

Tony Kish, Product Manager 22  
Fungicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs



4110 136TH ST CT NW  
GIG HARBOR, WA 98332  
T: (253) 853-7369  
F: (253) 853-5516  
MIKE@PYXISRC.COM

10/3

September 29, 2016

**ELECTRONIC DELIVERY**

Tony Kish (PM 22)  
Document Processing Desk (**NOTIF**)  
Office of Pesticide Programs (7504C)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202-4501

RE: Willowood, LLC – Willowood Pyrac 2EC (EPA Reg. No. 87290-64)  
Notification of a New Source of Active Ingredient per PRN 98-10

Dear Mr. Kish,

On behalf of Willowood, LLC please find the enclosed notification to the Confidential Statement of Formula (CSF) for Willowood Pyrac 2EC. Willowood is revising the CSF to add a new source of active ingredient. The new source is similar to the previous source and is registered for at least the same uses for which Willowood Pyrac 2EC is registered.

In support of this notification please find the enclosed documents:

1. Completed Application for Registration (EPA Form 8570-1)
2. One (1) copy of the Basic Formulation dated September 29, 2016
3. Formulators Exemption Statement (EPA Form 8570-27)
4. Letter of Authorization

The enclosed Basic CSF is intended to **REPLACE** the current approved Basic CSF dated May 2, 2016. Please feel free to call me if you have any questions or need any additional information.

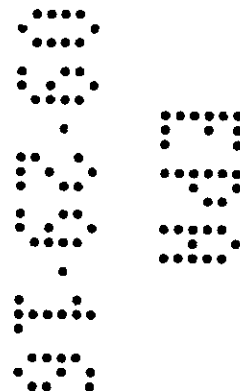
Sincerely,

A handwritten signature in black ink, appearing to read "Michael Kellogg", is written over a series of horizontal dotted lines.

Michael Kellogg

Enclosures

cc: B. Heinze; Willowood, LLC



DOCUMENTUM



# Environmental Protection Agency

United States  
Washington, DC 20460

- ☐ Registration  
☐ Amendment  
☒ Other

OPP Identifier Number

## Application for Pesticide - Section I

1. Company/Product Number 87290-64	2. EPA Product Manager T. Kish	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Willowood, LLC / Willowood Pyrac 2EC	PM# 22	
5. Name and Address of Applicant (include ZIP Code) Willowood, LLC c/o Pyxis Regulatory Consulting Inc. 4110 136 <sup>th</sup> St. Ct. NW Gig Harbor, WA 98332	6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

## Section - II

- ☐ Amendment - Explain below. ☐ Final printed labels in response to Agency letter dated \_\_\_\_\_
- ☐ Resubmission in response to Agency letter dated \_\_\_\_\_ ☐ "Me Too" Application.
- ☒ Notification - Explain below. ☐ Other - Explain below.

**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.)

Notification of a new source of active ingredient per PRN 98-10. This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

## Section - III

1. Material This Product Will Be Packaged In:					
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		2. Type of Container <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted					
	If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt.	No. per container	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1, 2.5, 30, 265 gallons		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input checked="" type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled <input type="checkbox"/> Other _____					

## Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Michael Kellogg	Title Agent	Telephone No. (Include Area Code) (253) 853-7369
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Agent	
4. Typed Name Michael Kellogg	5. Date Sep. 29, 2016	

DOCUMENTUM



**WILLOWOOD USA**

Your preferred manufacturer of post patent products

April 1, 2010

To Whom It May Concern:

RE: Letter of Authorization

Dear Sir or Madam:

Please let this letter serve to confirm that Pyxis Regulatory Consulting, Inc. is authorized to act as agent for Willowood, LLC (EPA Company Number 87290), before the U.S. Environmental Protection Agency, California Department of Pesticide Regulation Pesticide Registration Branch and other state governmental agencies in all matters regarding our pesticide registrations pursuant to the Federal Insecticide, Fungicide and Rodenticide Act ("FIFRA"), 7 U.S.C. § 136 et seq. and state law.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Brian Heinze  
President/CEO  
Willowood, LLC

cc: Pyxis Regulatory Consulting, Inc.



United States  
**Environmental Protection Agency**  
 Washington, DC 20460  
**Formulator's Exemption Statement**  
 (40 CFR 152.85)

Applicant's Name and Address  
 Willowood, LLC  
 1600 NW Garden Valley Blvd., Suite 120  
 Roseburg, OR 97471

EPA File Symbol/Registration Number  
 87290-64

Product Name  
 Willowood Pyrac 2EC

Date of Confidential Statement of Formula (EPA Form 8570-4)  
 Sep. 29, 2016

As an authorized representative of the applicant for registration of the product identified above, I certify that:

(1) This product contains the following active ingredient(s):

**Pyraclostrobin**

(2) Of these, each active ingredient listed in paragraph (4) is present solely as the result of the use of that active ingredient in the manufacturing, formulation or repackaging another product which contains that active ingredient which is registered under FIFRA Section 3, is purchased by us from another person and meets the requirements of 40 CFR section 158.50(e)(2) of (3).

(3) Indicated by checking (A) or (B) below which paragraph applies:

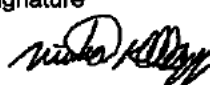
☒ (A) An accurate Confidential Statement of Formula (EPA FORM 8570-4) for the above identified product is attached to this statement. That formula statement indicates, by company name, registration number, and product name, the source of the active ingredient(s) listed in paragraph (1).

OR

☐ (B) The Confidential Statement of Formula (CSF) (EPA Form 8570-4) referenced above and on file with EPA is complete, current, and accurate and contains the information required on the current CSF.

(4) The following active ingredients in this product qualify for the formulator's exemption.

**Source**

Active Ingredient	Product Name	Registration Number
Pyraclostrobin		
Signature 	Name and Title Michael Kellogg   Agent	Date Sep. 29, 2016

EPA Form 8570-27 (Rev. 06-2004)

Copy 1 – EPA  
 Copy 2 – Applicant copy

\*Product ingredient source information may be entitled to confidential treatment\*

# PROCESSING REQUEST

Reg # 87290-64

Decision 516911

Description: Registration "Willowood Pyrac 2EC"

Electronic Label & Letter  
(see PPLS):

OR

Non Electronic  
Label & Letter  
(Scanning required):

☐ Dated:

☐ Dated:

\*\*\*Only one label type should be selected\*\*\*

Other Materials Sent (see jacket):

☒ New CSF(s) **Basic CSF dated 05/02/2016**

☐ Other:

File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring it down to the (ISC). For further information please call 703-605-0716.

**Reviewer:** Craig Reeves

**Division:** RD/FB

**Phone:** 703 347-0486

**Date:** 09/07/2016





U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division (7505P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

87290-64

Date of Issuance:

9/2/16

NOTICE OF PESTICIDE:

☒ Registration  
☐ Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

WILLOWOOD PYRAC 2EC

Name and Address of Registrant (include ZIP Code):

Michael Kellogg  
Agent for Willowood, LLC  
c/o Pyxis Regulatory Consulting, Inc.  
4110 136th St. Ct., NW  
Gig Harbor, WA 98332

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Tony Kish, Product Manager 22  
Fungicide Branch, Registration Division (7505P)

Date:

9/2/16

2. Be aware that this registration is subject to satisfying the proposed data requirements identified the GDCI-099100-1467 listed in the first website below. For more information on these proposed data requirements, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division in the second website below:

<http://www.regulations.gov/document?D=EPA-HQ-OPP-2014-0051-0019>

<http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1>

3. The data requirements for storage stability and corrosion characteristics (Guidelines 830.6317 and 830.6320) are not satisfied. A one year study is required to satisfy these data requirements. You must submit these data 12 months from the date of registration.
4. Make the following label change before you release the product for shipment. The brackets being optional text statement at the top of page 1 does not apply to the brackets in the chemical name.
  - Revise the EPA Registration Number to read, "EPA Reg. No. 87290-64."
5. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSF:

- Basic CSF dated May 02, 2016

If you have any questions, please contact Tony Kish by phone at 703 308-9443, or via email at [kish.tony@epa.gov](mailto:kish.tony@epa.gov); or Craig Reeves by phone at 703 347-0486, or via email at [reeves.craig@epa.gov](mailto:reeves.craig@epa.gov)

Attached: Stamped Label

**ACCEPTED**

**09/02/2016**

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for use  
pesticide registered under  
EPA Reg. No. 87290-64

[Note to reviewer: [Text] in brackets denotes optional text].

[Note to reviewer: {Text} in braces denotes where in the final label text will appear.]

**{BOOKLET FRONT PANEL LANGUAGE}**

**GROUP 11 FUNGICIDE**

**WILLOWOOD PYRAC 2EC**  
**FUNGICIDE**

For use in disease control and plant health in the following crops: alfalfa, barley, citrus fruit, corn (all types), cotton, dried shelled peas and beans, edible-podded legume vegetables, grass grown for seed, mint, oats, oilseed crops, peanut, pecan, rye, sorghum, soybean, succulent shelled peas and beans, sugar beet, sugarcane, tuberous and corm vegetables (includes potato), and wheat and triticale.

**ACTIVE INGREDIENT\*:**

Pyraclostrobin: (carbamic acid, [2-[[[1-(4-chlorophenyl)-1H-pyrazol-3-yl]oxy]methyl]phenyl] methoxy-, methyl ester).....23.6%

**OTHER INGREDIENTS\*\*:**.....76.4%

**TOTAL:**.....100.0%

\*Equivalent to 2.09 pounds of pyraclostrobin per gallon.

\*\*Contains petroleum distillates.

**KEEP OUT OF REACH OF CHILDREN**  
**WARNING/AVISO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand this label, find someone to explain it to you in detail).

See label booklet for First Aid, Precautionary Statements and Directions for Use.

**EPA Reg. No. 87290-xx**

**EPA Est. No.**

Manufactured for:  
Willowood, LLC  
1600 NW Garden Valley Blvd. #120  
Roseburg, OR 97471

**Net Contents:**

## {LANGUAGE INSIDE BOOKLET}

FIRST AID	
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• <b>Do not</b> give any liquid to the person.</li> <li>• <b>Do not</b> induce vomiting unless told to by a poison control center or doctor.</li> <li>• <b>Do not</b> give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eyes open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For general information on product use, etc., call the National Pesticides Information Center (NPIC) at 1-800-858-7378 Mon. - Fri. 8:00 am to 12:00 pm Pacific Time. For emergencies, call the poison control center at 1-800-222-1222.	
<b>NOTE TO PHYSICIAN:</b> Contains petroleum distillate. Vomiting may cause aspiration pneumonia.	

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**WARNING:** May be fatal if swallowed. Causes substantial but temporary eye irritation. Causes skin irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemically resistant to this product are listed below.

##### Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- Protective eyewear (goggles, face shield, or safety glasses)
- Socks
- Chemical-resistant footwear
- Chemical-resistant gloves made of any waterproof material (such as nitrile, butyl, neoprene and/or barrier laminate)
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, and loading

Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### ENGINEERING CONTROLS STATEMENTS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

#### User Safety Recommendations

##### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on

clean clothing.

- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### ENVIRONMENTAL HAZARDS

This product may contaminate water through drift of spray in wind. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecast to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

This pesticide is toxic to fish and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

**Do not** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. **Do not** contaminate water when disposing of equipment washwaters or rinsate.

#### Groundwater Advisory

This chemical has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

#### PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow contact with oxidizing agents. Hazardous chemical reaction may occur.

#### DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. **Do not** apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or tribe, consult the Agency responsible for pesticide regulation.

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**Do not** enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves, made of any waterproof material (such as nitrile, butyl, neoprene, and/or barrier laminate)
- Shoes plus socks

#### Product Information

Willowood Pyrac 2EC, a emulsifiable concentrate (SC), contains the active ingredient pyraclostrobin, a member of the strobilurin class of chemistry derived from a natural antifungal substance. Preventive applications optimize disease control, resulting in improved plant health. The increase in plant health comes from the combined effect of disease control (including fungal diseases listed in Crop-specific

directions), improved growth efficiency and improved stress tolerance. Overall increased plant health may result in an improvement in crop growth and crop quality as well as increased crop yields.

To maximize disease control, apply Willowood Pyrac 2EC in a regularly scheduled protective spray program and use in a rotation program with other fungicides.

Because of its high specific activity, Willowood Pyrac 2EC has good residual activity against target fungi.

Willowood Pyrac 2EC is not for use in greenhouse or transplant production.

### **Mode of Action**

Pyraclostrobin, the active ingredient of Willowood Pyrac 2EC, belongs to the group of respiration inhibitors classified by the U.S. EPA and Canada PMRA as quinone outside inhibitors (QoI) or target site of action Group 11 fungicides.

### **Resistance Management**

Willowood Pyrac 2EC is effective against pathogens resistant to fungicides with modes of action different from those of QoI fungicides (target site Group 11), such as dicarboximides, sterol inhibitors, benzimidazoles, or phenylamides.

Fungal isolates resistant to Group 11 fungicides, such as pyraclostrobin, azoxystrobin, fluoxastrobin, trifloxystrobin, and kresoxim-methyl, can eventually dominate the fungal population if Group 11 fungicides are used predominantly and repeatedly in the same field as successive years as the primary method of control for the targeted pathogen species. This can result in reduction of disease control by Willowood Pyrac 2EC or other Group 11 fungicides.

**DO NOT** exceed the maximum seasonal use rate or the total number of Willowood Pyrac 2EC applications per season and the maximum number of Willowood Pyrac 2EC applications stated in **Restrictions and Limitations – All Crops** and **Table 2. Willowood Pyrac 2EC Crop-Specific Requirements**. Follow the label instructions for use of Willowood Pyrac 2EC or other target site of action Group 11 fungicides that have a similar site of action on the same pathogens.

When using a Group 11 fungicide as a solo product, the number of applications should be no more than 1/3 of the total number of fungicide applications per season.

In programs applying or using tank mixes or pre-mixes of a Group 11 fungicide with a fungicide of another group, the number of Group 11 fungicide (QoI)-containing applications must not be more than 1/2 of the total number of fungicide applications per season. In programs applying or using Group 11 fungicides with both solo products and mixtures, the number of Group 11 fungicide (QoI)-containing applications must not be more than 1/2 of the total number of fungicide applications per season.

In fungicide alternation programs of Group 11 (QoI)-containing fungicides with non-Group 11 fungicides of different modes of action, the maximum number of sequential applications stated in **Restrictions and Limitations – All Crops** and **Table 2. Willowood Pyrac 2EC Crop-Specific Requirements** must be alternated with at least an equal number of applications of a non-Group 11-containing fungicide prior to using the Group 11 (QoI)-containing fungicide again. If two sequential applications of a Group 11 (QoI)-containing fungicide are made, follow this block of applications with 2 or more applications of a non-Group 11-containing fungicide prior to using the Group 11 (QoI)-containing fungicide again.

### **Resistance Management Advisory**

The following instructions may delay the development of fungicide resistance:

1. **Tank mixtures:** Use tank mixtures with effective fungicides from different target site of action groups that are registered/permitted for the same use and that are effective against the pathogens of concern.

Use at least the minimum labeled rates of each fungicide in the tank mix.

2. **IPM** – Integrate Willowood Pyrac 2EC into an overall disease and pest management program. Follow cultural practices known to reduce disease development. Consult your local extension specialist, certified crop advisor and/or Willowood, LLC representative for additional IPM strategies established for your area. Willowood Pyrac 2EC can be used in agricultural extension

advisory (disease forecasting) programs, which recommend application timing based on environmental factors favorable for disease development.

3. **Monitoring** – Monitor efficacy of all fungicides used in the disease management program against the targeted pathogen and record other factors that may influence fungicide performance and/or disease development. If a Group 11 target site fungicide, such as Willowood Pyrac 2EC, appears to be less effective against a pathogen that is previously controlled or suppressed, contact a Willowood, LLC representative, local extension specialist, or certified crop advisor for further investigation.

## **Application Instructions**

Apply Willowood Pyrac 2EC rates as instructed in **Table 2. Crop-specific Requirements**. Apply Willowood Pyrac 2EC with ground sprayer, aerial equipment, or through sprinkler irrigation equipment. Check equipment frequently for calibration.

Under low-level disease conditions, use minimum application rates. For severe or threatening disease conditions, use maximum application rates and shortened spray intervals.

## **Cleaning Spray Equipment**

Spraying equipment must be cleaned thoroughly before and after applying this product, particularly if a product with the potential to injure crops was used prior to Willowood Pyrac 2EC.

## **Ground Application**

Apply Willowood Pyrac 2EC in sufficient water to ensure thorough coverage of foliage, blooms, and fruit for optimum disease control. Refer to **Additives and Tank Mixing Information** section for adjuvant or crop oil restrictions for ground applications in corn. See **Table 2. Willowood Pyrac 2EC Crop-specific Requirements** for in-furrow instructions.

## **Aerial Application**

**For aerial application in New York State, do not apply within 100 feet of aquatic habitats (such as, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).**

Unless otherwise specified in this label or in supplemental labeling, use no less than 5 gallons of spray solution per acre. For aerial application to citrus orchards, use no less than 10 gallons of spray solution per acre. **Do not** apply when conditions favor drift from target area.

### **Aerial Application to Alfalfa, Barley, Corn, Oats, Rye, Soybean, Wheat and Triticale**

Aerial applications of Willowood Pyrac 2EC can be made to corn, soybean, wheat and triticale in water volumes of 1 or more gallons of spray solution per acre (gpa). Aerial applications of Willowood Pyrac 2EC can be made to alfalfa, barley, oats and rye in water volumes of 2 or more gallons of spray solution per acre (gpa). The use of a crop oil or adjuvant can be used to improve spray coverage (see **Additives and Tank Mixing Information** section). Refer to the adjuvant product label for specific use directions and restrictions.

For optimum results in cases of high disease pressure, use a minimum spray volume of 4 gpa. Select spray nozzles, pumping pressure, and sprayer height to provide medium-to-fine spray droplets that penetrate throughout the crop canopy. Spray calibration must be conducted to confirm spray droplet sizes. Continue to monitor spray application (including weather conditions) to ensure proper droplet size and canopy penetration.

## **Spray Drift Management**

**Do not** spray when conditions favor drift beyond area intended for application. Conditions that may contribute to drift include thermal inversion, wind speed and direction, spray nozzle/pressure combinations, spray droplet size, temperature/humidity, etc. Contact your state extension agent for spray drift prevention guidelines in your area. All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers. Avoiding spray drift at the application site is the responsibility of the applicator.

## Aerial Application Methods and Equipment

The interaction of many equipment-related and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

**Do not** apply under circumstances where possible drift to unprotected persons, to food, forage, or other plantings that might be damaged, or crops thereof rendered unfit for sale, use or consumption can occur.

**Do not** release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements **do not** apply to forestry applications, public health uses, or to applications using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the fixed wingspan or 90% of the rotor blade diameter.
2. Nozzles must always point backward parallel with the air stream and never be pointed downward more than 45 degrees.

Where states have more stringent regulations, they must be observed.

The applicator must be familiar with and take into account the aerial drift reduction advisory information.

## Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. Use the largest droplet size consistent with acceptable efficacy. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see **Wind**; **Temperature and Humidity**; and **Temperature Inversions**).

### Controlling Droplet Size:

- **Volume** – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** – **Do not** exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** – Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid-stream nozzles oriented straight back produce the largest droplets and the lowest drift.

## Wind

**Do not** apply at wind speeds greater than 15 mph. Drift potential is lowest when wind speed does not exceed 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Avoid applications below 2 mph due to variable wind direction and high inversion potential. Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

## Temperature and Humidity

Low humidity and high temperatures increase the evaporation of spray droplets and, therefore, the likelihood of increased spray drift. Avoid spraying during conditions of low humidity and/or high temperatures. When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.



## Temperature Inversions

Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light, variable winds common during inversions.

Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light-to-no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

## Sensitive Areas

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., bodies of water or non-target crops) is minimal and when wind is blowing away from the sensitive areas.

## Directions For Use Through Sprinkler Irrigation Systems

### Sprayer Preparation

Chemical tank and injector system must be thoroughly cleaned. Flush system with clean water.

### Application Instructions

Apply Willowood Pyrac 2EC at rates and timings specified in this label.

### Sprinkler Irrigation Applications Use Precautions

- Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. **Do not** apply this product through any other type of irrigation system.
- Add this product to the pesticide supply tank containing sufficient water to maintain a continuous flow by the injection equipment. In continuous moving systems, inject this product/water mixture continuously, applying the labeled rate per acre for that crop. **Do not** exceed  $\frac{1}{2}$  inch (13, 577 gallons) per acre. In stationary or non-continuous moving systems, inject the product/water mixture in the last 15 to 30 minutes of each set allowing sufficient time for all of the required pesticide to be applied by all the sprinkler heads and applying the labeled rate per acre for that crop. **Do not** apply when wind speed favors drift beyond the area intended for treatment. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. Thorough coverage of foliage is required for good control. Maintain agitation during the entire application period.
- Contact state extension service specialists, equipment manufacturers, or other experts for calibration questions.
- The system must contain a functional check valve, vacuum-relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide-injection pump when the water pump motor stops.

- The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation, or under supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- **Do not** connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

### **Specific Instructions for Public Water**

1. Public water systems means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system must be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

### **Additives and Tank Mixing Information**

Willowood Pyrac 2EC fungicide can be tank mixed with most recommended fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives as specified in **Table 2. Willowood Pyrac 2EC Crop-specific Requirements.**

Under some conditions, the use of additives or adjuvants may improve the performance of Willowood Pyrac 2EC. However, all varieties and cultivars have not been tested with possible tank mix combinations. Local conditions can also influence crop tolerance. Physical incompatibility, reduced disease control, or crop injury can result from mixing Willowood Pyrac 2EC with other products. Therefore, before using any tank mix (fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants and additives), test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of application. Follow the most restrictive label.

### **Adjuvant or Crop Oil Use Limitations on Corn (ground and aerial applications)**

Adjuvant crop damage can occur when an adjuvant or crop oil is used after the V8 stage and before the VT stage (the VT stage is defined as when the tassel's last branch is completely visible outside the whorl). If an adjuvant or crop oil is used after the V8 stage and before the VT stage, the grower and user are responsible for contacting the adjuvant source (adjuvant distributor, retailer, or manufacturer) for advice and confirmation that the adjuvant has been tested and proven to be safe for application from V8 to VT corn stage. Refer to adjuvant and/or crop oil labels for specific use directions and restrictions. Always follow the most restrictive label.

Another fungicide or an insecticide may be included in the tank mix if needed and labeled for use on corn. Refer to the tank mix pesticide product labels for specific use directions and restrictions. Always follow the most restrictive label.

### **Mixing Order**

1. **Water** – Agitate a thoroughly clean sprayer tank  $\frac{3}{4}$  full of clean water.
2. **Agitation** – Maintain constant agitation throughout mixing and application.
3. **Inductor** – If an inductor is used, rinse it thoroughly after each component has been added.
4. **Products in PVA bags** – Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
5. **Water-dispersible products** (such as dry flowables, wettable powders, suspension concentrates, or suspo-emulsions)
6. **Water-soluble products**
7. **Emulsifiable concentrates** (such as Willowood Pyrac 2EC, or oil concentrates when applicable)
8. **Water-soluble additives** (such as ammonium sulfate [AMS] or urea ammonium nitrate [UAN] when applicable)
9. **Remaining quantity of water**

Make sure each component is thoroughly mixed and suspended before adding tank mix partners. Maintain constant agitation during application. See **Table 2. Willowood Pyrac 2EC Crop-specific Requirements** for more details.

### **Restrictions and Limitations – All Crops**

- **Do not exceed the maximum product rate (fl ozs/A) per year (season), the maximum rate per application, or the total number of applications of Willowood Pyrac 2EC per year (season) as stated in Table 1. Willowood Pyrac 2EC Restrictions and Limitations Overview and Table 2. Willowood Pyrac 2EC Crop-specific Requirements.** Preharvest interval (PHI) restrictions are also included in these tables.
- **Do not use Willowood Pyrac 2EC in greenhouse or transplant production.**
- **For aerial application in New York State, do not apply within 100 feet of aquatic habitats (such as, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).**

### **Crop Rotation Restriction**

Crops listed on the Willowood Pyrac 2EC, Cabrio® EG fungicide and Pristine® fungicide labels may be planted immediately following the last application. For all other crops, **do not plant sooner than 14 days after the last application.**

### **Ground Application Directed or Banded Sprays**

The application rates shown in the following tables pertain to both aerial and ground (broadcast) methods of application. Willowood Pyrac 2EC may also be applied as a directed or banded spray over the rows or plant beds with alleys or row middles left unsprayed. For such uses, reduce the Willowood Pyrac 2EC

rate in proportion to the area actually sprayed. This adjustment is necessary to prevent applying the product at use rates higher than permitted on this label.

Use the following formula to determine the broadcast equivalent rate for directed or banded sprays:

Sprayed bed width + unsprayed row middles = total row width

$$\frac{\text{Sprayed bed width in inches}}{\text{Total row width in inches}} \times \frac{\text{broadcast rate}}{\text{treated acre}} = \frac{\text{band rate}}{\text{field acre}}$$

**EXAMPLE:** Directed spray application to 45-inch plant beds separated by 15-inch unsprayed row-middles at a 12 fl ozs/A broadcast rate:

45 inches sprayed bed width + 15 inches unsprayed row middles = 60 inches total row width

$$\frac{45 \text{ inches sprayed bed width}}{60 \text{ inches total row width}} \times \frac{12 \text{ fl ozs Willowood Pyrac 2EC}}{\text{treated acre}} = \frac{9 \text{ fl ozs Willowood Pyrac 2EC}}{\text{field acre}}$$

**Table 1. Willowood Pyrac 2EC Restrictions and Limitations Overview\***

Crop/Crop Group**	Minimum Time from Application to Harvest (PHI)(days)	Maximum Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Year (Season) (fl ozs/A) (lbs ai pyraclostrobin)
Alfalfa	14	9	3	27**** (0.45)
Barley	See Table 2. Willowood Pyrac 2EC Crop-specific Requirements	9	2	18 (0.29)
Citrus Fruits Group***	0	15	2	54 (0.88)
Corn**** (all types)	7	12	2	72 (1.18)
Cotton****	30	12	2	36 (0.58)
Dried Shelled Peas and Beans**** (except soybeans)	21	9	2	18 (0.29)
Edible-podded Legume Vegetables	7	9	2	18 (0.29)
Grass Grown for Seed	14	12	2	24 (0.39)
Mint	14	12	2	48 (0.78)
Oats	Apply no later than the beginning of flowering (Feekes 10.5, Zadok's 59)	9	2	18 (0.29)
Oilseed Crops****	21	12	2	24 (0.39)
Peanut****	14	15	2	45 (0.73)
Pecan	14	7	2	28

Crop/Crop Group**	Minimum Time from Application to Harvest (PHI)(days)	Maximum Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Year (Season) (fl ozs/A) (lbs ai pyraclostrobin)
				(0.46)
Rye	Apply no later than 50% head emergence (Feekes 10.3, Zadok's 55)	9	2	18 (0.29)
Sorghum	Apply no later than 25% flowering	12	1	12 (0.20)
Soybean****	21	12	2	24 (0.39)
Succulent Shelled Peas and Beans	7	9	2	18 (0.29)
Sugar Beet**** (roots and tops)	7	12	2	48 (0.78)
Sugarcane	14	12	2	48 (0.78)
Tuberous Corn Vegetables Subgroup**** (includes potato)	3	12	1	72 (1.18)
Wheat and Triticale	Apply no later than the beginning of flowering (Feekes 10.5, Zadok's 59)	9	2	18 (0.29)

\*See Table 2. Willowood Pyrac 2EC Crop-specific Requirements for complete directions and exceptions.

\*\*For a complete list of crops within a crop group, see Table 2. Willowood Pyrac 2EC Crop-specific Requirements.

\*\*\*Maximum product rate per acre per application may vary for citrus fruits depending on target disease. Refer to Table 2. Willowood Pyrac 2EC Crop-specific Requirements, Citrus Fruits for maximum rates per application by target disease.

\*\*\*\*The maximum product rate per season includes the combination in-furrow and foliar uses.

\*\*\*\*\*DO NOT apply more than 27 fl. oz./A (0.45 lb. ai/acre) of this product in alfalfa per year (season).

Aerial application is permitted for all labeled crops. For aerial application in New York State, DO NOT apply within 100 feet of aquatic habitats (such as, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season* (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Alfalfa	Anthrachnose <i>Colletotrichum trifolii</i>  Common leaf spot <i>Pseudopeziza medicaginis</i>  Downy mildew	6 to 9	3	27 (0.45 lb ai/acre)	14

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season* (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
	<i>Peronospora trifoliorum</i> Leaf spot <i>Leptosphaerulina briosiani</i> Powdery mildew <i>Erysiphe pisi</i> Rhizoctonia blight/black patch <i>Rhizoctonia</i> spp. Rust <i>Uromyces</i> spp. Spring black stem and leaf spot <i>Phoma medicaginis</i> Stagnospora leaf spot <i>Stagnospora melilot</i> Stemphyllium leaf spot <i>Stemphyllium</i> spp. Summer black stem and leaf spot <i>Cercospora medicaginis</i> Yellow leaf blotch <i>Leptotrichila medicaginis</i>				

**Application Directions:** For optimal disease control, begin Willowood Pyrac 2EC applications prior to disease development.

**Resistance Management.** Do not make more than three (3) Willowood Pyrac 2EC applications per year (season).

Repeat applications on a 14 to 21 day interval if conditions are conducive for disease development. Do not make more than two (2) Willowood Pyrac 2EC applications per cutting or three (3) Willowood Pyrac 2EC applications per year. Use the higher rate and shorter interval when disease pressure is high.

\*Do not apply more than 27 fl ozs/A (0.45 lb ai/acre) of Willowood Pyrac 2EC in alfalfa per year (season).

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Barley	Black point	6 to 9*	2	18	Apply no

	Kernal blight or Head mold <i>Cochliobolus sativus</i> , <i>Alternaria</i> spp.  Leaf rust <i>Puccinia hordei</i> , <i>P. recondite</i>  Net blotch <i>Pyrenophora teres</i>  Powdery mildew <i>Erysiphe graminis</i> f. sp., <i>hordei</i>  Scald <i>Rhynchosporium secalis</i>  Septoria leaf and glume blotch <i>Septoria</i> spp., <i>Stagonospora</i> spp.  Spot Blotch <i>Cochliobolus sativus</i>  Stem Rust <i>Puccinia graminis</i> f. sp., <i>tritici</i>  Stripe rust <i>Puccinia striiformis</i>  Tan Spot Yellow leaf spot <i>Pyrenophora trichostoma</i>			(0.29 lb ai/acre)	later than 50% head emergence (Feekes 10.3, Zadok's 55); 14 days in selected states (see map).
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**Application Directions.** Begin Willowood Pyrac 2EC applications prior to disease development. To maximize yields in cereals, protect the flag leaf. Apply Willowood Pyrac 2EC immediately after flag-leaf emergence for optimum results.

Willowood Pyrac 2EC does not control Fusarium head blight (head scab) or prevent the reductions in grain quality that can result from this disease. When head blight is a concern, manage this disease with fungicides that are labeled for and effective in managing this disease, and with cultural practices like crop rotation and plowing to reduce crop residues that serve as an inoculum source.

**Resistance Management.** To limit development of resistance, **do not** apply more than 0.29 lb ai pyraclostrobin (18 fl ozs Willowood Pyrac 2EC) per acre per season.

**Do not** make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a labeled non-Group 11 fungicide with a different mode of action.

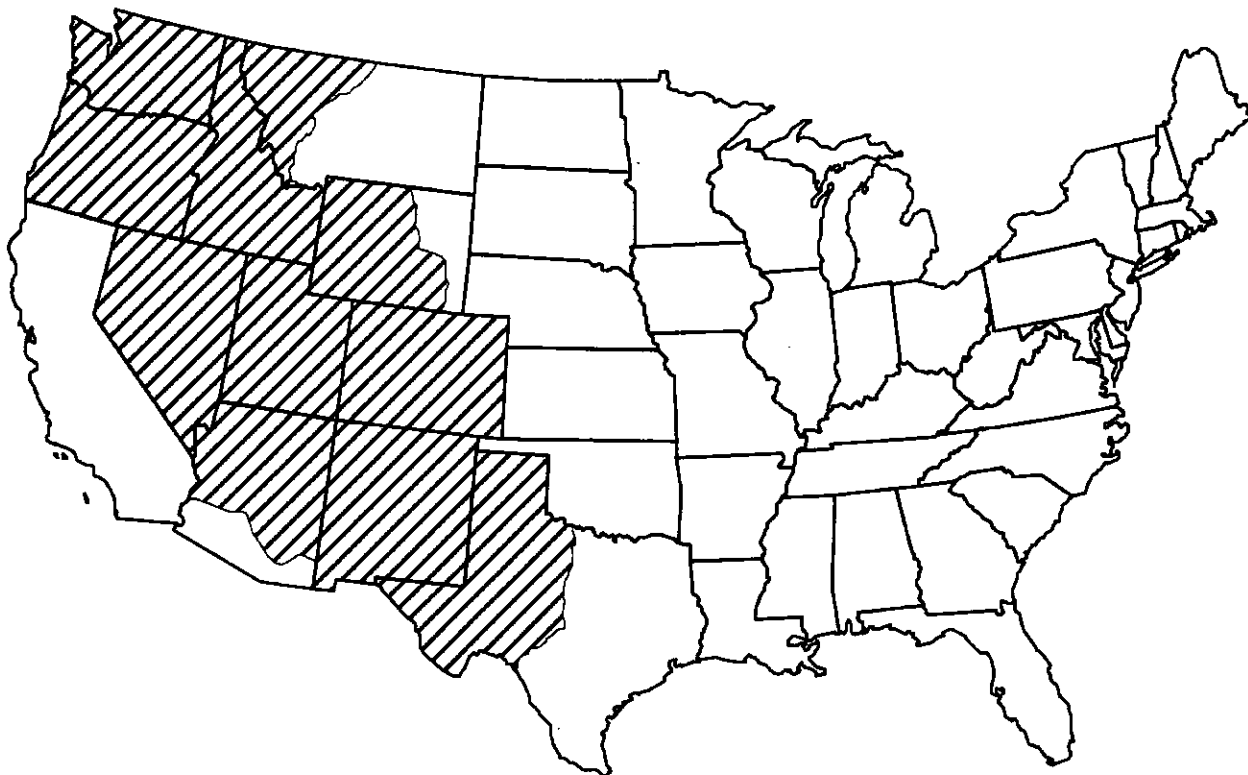
**Do not** harvest barley hay or feed green-chopped barley within 14 days of last application.

\*For early season control of net blotch, Septoria leaf and glume blotch, spot blotch, and tan spot when conditions favor disease development, apply 3 to 6 fl ozs per acre of Willowood Pyrac 2EC either in combination with a herbicide application or when conditions favor disease development. When the 3 to 6 fl ozs early season application rate is used, a second application of Willowood Pyrac 2EC may be required to protect the emerged flag leaf. Environmental conditions for disease or current disease

pressure at the time of flag-leaf emergence should be used to determine the Willowood Pyrac 2EC rate for the second application. For high disease pressure, use the higher rate of Willowood Pyrac 2EC. Early season control is not registered for use in California.

Barley can be harvested 14 days after the last application in the following states: AZ (north of I-10), CO, ID, MT (west of Rt 87/I-15), NV, NM, OR, TX (west of Rt 283/377), UT, WA, and WY (west of I-25/I-90), as shown in the 14-Day PHI Use Area for Barley map.

**14-Day PHI Use Area for Barley**



**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Follar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
<b>Citrus Fruits Group</b>	Greasy spot <i>Mycosphaerella citri</i>	9 to 12	2	54 (0.88 lb ai/acre)	0
Australian desert lime	Scab <i>Elsinoe</i> spp.				
Australian finger lime	Alternaria brown spot <i>Alternaria citria</i>	12 to 15			
Australian round lime	Anthracnose <i>Colletotrichum acutatum</i> , <i>C. gloeosporioides</i>				
Brown River finger lime					
Calamondin	Black spot				



Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Chironja	<i>Guignardia citricarpa</i>				
Citron	Melanose				
Citrus hybrids	<i>Diaporthe citri</i>				
Grapefruit	Post bloom fruit drop				
Japanese summer grapefruit	<i>Colletotrichum acutatum</i>				
Kumquat					
Lemon					
Lime					
Mediterranean mandarin					
Mount white lime					
New guinea wild lime					
Orange, sour					
Orange, sweet					
Pummelo					
Russell River lime					
Satsuma mandarin					
Sweet lime					
Tachibana orange					
Tahiti lime					
Tangelo					
Tangerine (mandarin)					
Tangor					
Trifoliate orange					
Uniq fruit					
Cultivars, varieties and/or hybrids of these					
<b>Application Directions.</b> Begin Willowood Pyrac 2EC applications prior to disease development and continue on a 10- to 21-day interval.					

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
<p>Use the higher rate when disease pressure is high.</p> <p><b>For control of disease other than greasy spot</b>, integrate 1 to 2 Willowood Pyrac 2EC applications early in the spray program. <b>For greasy spot control</b>, integrate 1 to 2 Willowood Pyrac 2EC applications into the fungicide program during the mid- to late-season.</p> <p>For aerial application to citrus orchards, use no less than 10 gallons of spray solution per acre.</p> <p>No livestock feeding restrictions.</p> <p><b>Resistance Management.</b> To limit development of resistance, <b>do not</b> apply more than 0.88 lb ai pyraclostrobin (54 fl ozs of Willowood Pyrac 2EC) per acre per season.</p> <p><b>Do not</b> make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a labeled non-Group 11 fungicide with a different mode of action.</p>					

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season** (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
<b>Corn</b> Field corn Popcorn Sweet corn  Seed production corn	Anthrachnose* <i>Colletotrichum graminicola</i>	6 to 12	2	72 (1.18 lbs ai/acre)	7
	Eyespot <i>Kabatella zeae</i>				
	Gray leaf spot <i>Cercospora zeamaydis</i>				
	Northern corn leaf blight* <i>Exserohilum turcicum</i>				
	Northern corn leaf spot* <i>Cochliobolus carbonum</i>				
	Physoderma brown spot* <i>Physoderma maydis</i>				
	Rust, common <i>Puccinia sorghi</i>				
	Rust, Southern <i>Puccinia polyspora</i>				
	Southern corn leaf				

	blight* <i>Bipolaris maydis</i>  Yellow leaf blight* <i>Phyllosticta maydis</i>				
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**Application Directions.** Begin Willowood Pyrac 2EC applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high. Under high disease pressure for Northern corn leaf blight and Southern corn leaf blight, apply 9 to 12 fl ozs per acre.

Willowood Pyrac 2EC can be used with adjuvants in corn. See **Additives and Tank Mixing Information** and **Mixing Order** section for more details.

No livestock feeding restrictions.

**Resistance Management.** To limit development of resistance, **do not** apply more than 1.18 lbs ai pyraclostrobin (72 fl ozs of Willowood Pyrac 2EC) per acre per season.

**In field corn, do not** make more than two (2) Willowood Pyrac 2EC applications per season.

**Do not** make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a labeled non-Group 11 fungicide with a different mode of action. If more than two (2) Willowood Pyrac 2EC applications are made in a multiple spray program, alternate each subsequent Willowood Pyrac 2EC application with at least one (1) application of a non-Group 11 fungicide.

\*The use rate in California is 9 to 12 fl ozs per acre.

\*\*The maximum product rate per season includes the combination of in-furrow and foliar uses.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Instructions for In-furrow Use to Aid in the Control of Soilborne Rhizoctonia in Corn									
Rate per 1000 row feet (fl oz product)	Willowood Pyrac 2EC Rate (fl ozs/A)								
	15-inch rows	20-inch rows	22-inch rows	30-inch rows	32-inch rows	34-inch rows	36-inch rows	38-inch rows	40-inch rows
0.1	3.5								
0.2	7.0	5.2	4.7	3.5	3.3	3.2	3.0		
0.3	10.5	7.8	7.1	5.2	5.0	4.8	4.5	4.3	4.0
0.4	see footnote <sup>1</sup>	10.4	9.5	6.9	6.7	6.4	6.0	5.7	5.4
0.5	see footnote <sup>1</sup>	see footnote <sup>1</sup>	11.8	8.7	8.4	8.0	7.5	7.1	6.7
0.6	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	10.4	10.0	9.6	9.0	8.5	8.1
0.7	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	11.7	11.2	10.5	10.0	9.4
0.8	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	12.0	11.4	10.8

**Applications Directions.** Use 0.1 to 0.8 fl oz of Willowood Pyrac 2EC per 1000 row feet. Apply at planting as an in-furrow application by directing the spray into the furrow before seed is covered. Use a minimum application volume of 2.5 gallons of water per acre.

When Rhizoctonia seedling disease pressure conditions are expected to be severe or if the field has a history of seedling diseases, use Willowood Pyrac 2EC at a product rate per acre equivalent to 9 to 12 fl ozs and/or tank mix with a fungicide having a different mode of action.

**Do not** apply more than 12 fl ozs per acre of Willowood Pyrac 2EC.

<sup>1</sup>For 32- to 34-inch rows, use a maximum of 0.7 fl oz per 1000 row feet.

For 30-inch rows, use a maximum of 0.6 fl oz per 1000 row feet.  
 For 22-inch rows, use a maximum of 0.5 fl oz per 1000 row feet.  
 For 20-inch rows, use a maximum of 0.4 fl oz per 1000 row feet.  
 For 15-inch rows, use a maximum of 0.3 fl oz per 1000 row feet.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season* (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Cotton	Alternaria leaf spot, boll rot <i>Alternaria</i> spp.	6 to 12	2	36 (0.58 lb ai/acre)	30
	Anthrachnose, boll rot <i>Glomerella</i> spp.				
	Ascochyta blight, boll rot <i>Ascochyta</i> spp.				
	Cercospora blight and leaf spot <i>Cercospora</i> spp.				
	Diplodia boll rot <i>Diplodia</i> spp.				
	Hard lock, boll rot <i>Fusarium</i> spp.				
	Phoma blight, boll rot <i>Phoma</i> spp.				
	Rust <i>Puccinia</i> spp., <i>Phykopsora</i> spp.				
	Stemphyllium leaf spot <i>Stemphyllium</i> spp.				

**Applications Directions.** For foliar and boll rot disease control, begin Willowood Pyrac 2EC applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high. For seedling disease control, see in-furrow application instructions following.

No livestock grazing or feeding restrictions.

**Resistance Management.** To limit development of resistance, do not apply more than 0.58 lb ai pyraclostrobin (36 fl ozs of Willowood Pyrac 2EC) per acre per season.

Do not make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a labeled non-Group 11 fungicide with a different mode of action.

\*The maximum product rate per season includes the combination of in-furrow and foliar uses.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Instructions for In-furrow Use to Aid in the Control of Soilborne Rhizoctonia in Cotton									
Rate per 1000 row feet (fl oz product)	Willowood Pyrac 2EC Rate (fl ozs/A)								
	15-inch rows	20-inch rows	22-inch rows	30-inch rows	32-inch rows	34-inch rows	36-inch rows	38-inch rows	40-inch rows
0.1	3.5								
0.2	7.0	5.2	4.7	3.5	3.3	3.2	3.0		
0.3	10.5	7.8	7.1	5.2	5.0	4.8	4.5	4.3	4.0
0.4	see footnote <sup>1</sup>	10.4	9.5	6.9	6.7	6.4	6.0	5.7	5.4
0.5	see footnote <sup>1</sup>	see footnote <sup>1</sup>	11.8	8.7	8.4	8.0	7.5	7.1	6.7
0.6	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	10.4	10.0	9.6	9.0	8.5	8.1
0.7	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	11.7	11.2	10.5	10.0	9.4
0.8	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	12.0	11.4	10.8
<p><b>Applications Directions.</b> Use 0.1 to 0.8 fl oz of Willowood Pyrac 2EC per 1000 row feet. Refer to this chart to determine the rate per acre. Apply at planting as an infurrow application by directing the spray into the furrow before seed is covered. Use a minimum application volume of 2.5 gallons of water per acre.</p> <p>When Rhizoctonia seedling disease pressure conditions are expected to be severe or if the field has a history of seedling diseases, use Willowood Pyrac 2EC at a product rate per acre equivalent to 9 to 12 fl ozs and/or tank mix with a fungicide having a different mode of action.</p> <p><b>Do not</b> apply more than 12 fl ozs per acre of Willowood Pyrac 2EC.</p>									
<p><sup>1</sup>For 32- to 34-inch rows, use a maximum of 0.7 fl oz per 1000 row feet.  For 30-inch rows, use a maximum of 0.6 fl oz per 1000 row feet.  For 22-inch rows, use a maximum of 0.5 fl oz per 1000 row feet.  For 20-inch rows, use a maximum of 0.4 fl oz per 1000 row feet.  For 15-inch rows, use a maximum of 0.3 fl oz per 1000 row feet.</p>									

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season* (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
<b>Dried Shelled Peas and Beans (except soybeans)</b> Broad bean Chickpea Guar Lablab bean Lentil Pigeon pea  <b>Lupinus spp.</b> Grain lupin Sweet lupin White lupin  <b>Phaseolus spp.</b> Field bean Kidney bean Lima bean Navy bean Pink bean Pinto bean Tepary bean  <b>Vigna spp.</b> Adzuki bean Black-eyed pea Catjang Cowpea Crowder pea Moth bean Mung bean Rice bean Southern pea Urd bean  <b>Pisum spp.</b> Field pea	Anthracnose <i>Colletotrichum</i> spp.  Alternaria leaf and pod spot <i>Alternaria</i> spp.  Ascochyta blight <i>Phoma exigua</i> , <i>Ascochyta</i> spp.  Asian soybean rust <i>Phakopsora pachyrhizi</i>  Cercospora leaf spot <i>Cercospora</i> spp.  Downy mildew <i>Phytophthora nicotianae</i>  Mycosphaerella blight <i>Mycosphaerella</i> spp.  Powdery mildew <i>Erysiphe polygoni</i>  Rust <i>Uromyces appendiculatus</i>	6 to 9	2	18 (0.29 lb ai/acre)	21

**Applications Directions.** Begin Willowood Pyrac 2EC applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high.

Bean forage, bean hay, pea vines, and pea hay may be fed no sooner than 14 days after last application.

Willowood Pyrac 2EC can be used with adjuvants in dried shelled peas and beans (except soybean). See **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

**Resistance Management.** To limit development of resistance, **do not** apply more than 0.29 lb ai pyraclostrobin (18 fl ozs of Willowood Pyrac 2EC) per acre per season.

**Do not** make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a

labeled non-Group 11 fungicide with a different mode of action.

\*The maximum product rate per season includes the combination of in-furrow and foliar uses for dried shelled beans.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Instructions for In-furrow Use to Aid in the Control of Soilborne Rhizoctonia in Dried Shelled Beans* (except soybeans)									
Rate per 1000 row feet (fl oz product)	Willowood Pyrac 2EC Rate (fl ozs/A)								
	15-inch rows	20-inch rows	22-inch rows	30-inch rows	32-inch rows	34-inch rows	36-inch rows	38-inch rows	40-inch rows
0.1	3.5								
0.2	7.0	5.2	4.7	3.5	3.3	3.2	3.0		
0.3	see footnote <sup>1</sup>	7.8	7.1	5.2	5.0	4.8	4.5	4.3	4.0
0.4	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	6.9	6.7	6.4	6.0	5.7	5.4
0.5	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	8.7	8.4	8.0	7.5	7.1	6.7
0.6	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	9.0	8.5	8.1
<b>Applications Directions.</b> Use 0.1 to 0.6 fl oz of Willowood Pyrac 2EC per 1000 row feet. Apply at planting as an in-furrow application by directing the spray into the furrow before seed is covered. Use a minimum application volume of 2.5 gallons of water per acre.  When Rhizoctonia seedling disease pressure conditions are expected to be severe or if the field has a history of seedling diseases, use Willowood Pyrac 2EC at a product rate per acre equivalent to 9 fl ozs and/or tank mix with a fungicide having a different mode of action.  <b>Do not</b> apply more than 9 fl ozs per acre of Willowood Pyrac 2EC.  *Adzuki bean, black-eyed pea, broad bean, catjang, chickpea, crowder pea, field bean, grain lupin, guar, kidney bean, lablab bean, lima bean, moth bean, mung bean, navy bean, pink bean, pinto bean, rice bean, Southern pea, sweet lupin, tepary bean, urd bean, and white lupin  <sup>1</sup> For 30- to 34-inch rows, use a maximum of 0.5 fl oz per 1000 row feet. For 20- to 22-inch rows, use a maximum of 0.3 fl oz per 1000 row feet. For 15-inch rows, use a maximum of 0.2 fl oz per 1000 row feet.									

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
<b>Edible-podded Legume Vegetables</b>	Alternaria leaf and pod spot <i>Alternaria</i> spp.	6 to 9	2	18 (0.29 lb ai/acre)	7
Jack bean Pigeon pea Soybean (immature seed) Sword bean	Anthrachnose <i>Colletotrichum</i> spp.  Ascochyta blight <i>Phoma exigua</i> , <i>Ascochyta</i> spp.				
<b>Phaseolus</b>	Asian soybean rust				

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
<b>spp.</b> Runner bean Snap bean Wax bean  <b>Vigna spp.</b> Asparagus bean Chinese longbean Moth bean Yardlong bean  <b>Pisum spp.</b> Dwarf pea Edible-podded pea Snowpea Sugar snap pea	<i>Phakopsora pachyrhizi</i>  Cercospora leaf spot <i>Cercospora</i> spp.  Downy mildew <i>Phytophthora nicotianae</i>  Mycosphaerella blight <i>Mycosphaerella</i> spp.  Powdery mildew <i>Erysiphe polygoni</i>  Rust <i>Uromyces appendiculatus</i>				

**Applications Directions.** Begin Willowood Pyrac 2EC applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high.

Bean forage, bean hay, pea vines, and pea hay may be fed no sooner than 14 days after last application.

Willowood Pyrac 2EC can be used with adjuvants in edible-podded legume vegetables. See **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

**Resistance Management.** To limit development of resistance, **do not** apply more than 0.29 lb ai pyraclostrobin (18 fl ozs of Willowood Pyrac 2EC) per acre per season.

**Do not** make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a labeled non-Group 11 fungicide with a different mode of action.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
<b>Grass Grown for Seed</b>	Rust <i>Puccinia recondita</i> , <i>P. graminis</i>  <u><b>Suppression Only:</b></u> Powdery mildew <i>Erysiphe graminis</i>	6 to 12	2	24 (0.39 lb ai/acre)	14

**Applications Directions.** Begin Willowood Pyrac 2EC applications prior to disease development. Apply again 14 to 21 days later.

Use the higher rate and shorter interval when disease pressure is high.



**Do not graze or feed forage or hay to livestock within 27 days of last application.**

**Resistance Management.** To limit development of resistance, **do not** apply more than 0.39 lb ai pyraclostrobin (24 fl ozs of Willowood Pyrac 2EC) per acre per season.

**Do not** make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a labeled non-Group 11 fungicide with a different mode of action.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Mint	Leaf spot <i>Ramularia</i> spp., <i>Alternaria</i> spp., <i>Phoma</i> spp.  Powdery mildew <i>Erysiphe</i> spp.  Rust <i>Puccinia</i> spp.	9 to 12	2	48 (0.78 lb ai/acre)	14

**Applications Directions.** Begin Willowood Pyrac 2EC applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high.

Willowood Pyrac 2EC can be used with adjuvants in mint. See **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

**Resistance Management.** To limit development of resistance, **do not** apply more than 0.78 lb ai pyraclostrobin (48 fl ozs of Willowood Pyrac 2EC) per acre per season.

**Do not** make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a labeled non-Group 11 fungicide with a different mode of action.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Oats	Crown rust <i>Puccinia coronata</i>  Helminthosporium leaf spot <i>Drechslera avenae</i>  Leaf blotch <i>Pyrenophora avenae</i>  Leaf rust <i>Puccinia</i> spp.	6 to 9*	2	18 (0.29 lb ai/acre)	Apply no later than the beginning of flowering (Feekes 10.5, Zadok's 59)

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
	Septoria blotch and stem rot <i>Septoria avenae</i> , <i>Phaeosphaeria avenaria</i> , <i>Stagnospora avenae</i>  Spot blotch <i>Bipolaris</i> spp.  Stem rust <i>Puccinia graminis</i>				

**Applications Directions.** Begin Willowood Pyrac 2EC applications prior to disease development. To maximize yields in cereals, protect the flag leaf. Apply Willowood Pyrac 2EC immediately after flag-leaf emergence for optimum results.

Willowood Pyrac 2EC does not control Fusarium head blight (head scab) or prevent reductions in grain quality that can result from this disease. When head blight is a concern, manage this disease with fungicides that are labeled for and effective in managing the disease, and with cultural practices like crop rotation and plowing to reduce crop residues that serve as an inoculum source.

**Do not** harvest oat hay or feed green-chopped oats within 14 days of last application.

**Resistance Management.** To limit development of resistance, **do not** apply more than 0.29 lb ai pyraclostrobin (18 fl ozs of Willowood Pyrac 2EC) per acre per season.

**Do not** make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a labeled non-Group 11 fungicide with a different mode of action.

\*For early season control of leaf blotch, Septoria blotch and stem rot, and spot blotch when conditions favor disease development, apply 3 to 6 fl ozs per acre of Willowood Pyrac 2EC either in combination with a herbicide application or when conditions favor disease development. When the 3 to 6 fl ozs early season application rate is used, a second application of Willowood Pyrac 2EC may be required to protect the emerged flag leaf. Environmental conditions for disease or current disease pressure at the time of flag-leaf emergence should be used to determine the Willowood Pyrac 2EC rate for the second application. For high disease pressure, use the higher rate of Willowood Pyrac 2EC. Early season control is not registered for use in California.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season* (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Oilseed Crops	Pasmo	6 to 12	2	24 (0.39 lb ai/acre)	21
Flax seed	<i>Septoria linicola</i>				
Rapeseed	Blackleg <i>Leptosphaeria maculans</i>				
	Blackspot				

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season* (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Sunflower	<i>Alternaria</i> spp.				
	Alternaria leaf spot <i>Alternaria</i> spp.				
	Cercospora leaf spot <i>Cercospora helianthi</i>				
	Downy mildew <i>Plasmopara halstedii</i>				
	Powdery mildew <i>Erysiphe cichoracearum</i>				
	Rust <i>Puccinia helianthi</i> <i>Uromyces</i> spp.				
	Septoria leaf spot <i>Septoria</i> spp.				
	White rust <i>Albugo tragopogonis</i>				

**Applications Directions.** Begin Willowood Pyrac 2EC applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

**Flax seed.** Apply Willowood Pyrac 2EC at mid-flowering (7 to 10 days after flower initiation). Make a second application 7 to 10 days later if disease persists or if weather conditions are favorable for disease development.

**Rapeseed.** For control of blackleg, apply Willowood Pyrac 2EC at 2- to 4-leaf stage. For control of blackspot, apply Willowood Pyrac 2EC at early pod development. A second application 7 to 10 days later can be made if disease persists or if weather conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high.

Willowood Pyrac 2EC can be used with adjuvants in oilseed crops. See **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

No livestock feeding restrictions.

**Resistance Management.** To limit development of resistance, **do not** apply more than 0.39 lb ai pyraclostrobin (24 fl ozs of Willowood Pyrac 2EC) per acre per season.

**Do not** make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a labeled non-Group 11 fungicide with a different mode of action.

\*The maximum product rate per season for **sunflower** includes the combination of in-furrow and foliar uses.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

<b>Crop</b>	<b>Target Disease</b>	<b>Product Rate per Application (fl ozs/A)</b>	<b>Maximum Number of Sequential Foliar Applications</b>	<b>Maximum Product Rate per Season (fl ozs/A)</b>	<b>Minimum Time from Application to Harvest (PHI) (days)</b>
<b>Oilseed Crops (continued)</b>  Borage Calendula Castor oil plant Chinese tallowtree Crambe Cuphea Echium Euphorbia Evening primrose Gold of pleasure Hare's ear mustard Jojoba Lesquerella Lunaria Meadowfoam Milkweed Mustard seed Niger seed Oil radish Poppy seed Rose hip Safflower Sesame Stokes aster Sweet rocket Tallowwood Teal oil plant Vernonia	<i>Alternaria</i> spp.  <i>Septoria</i> spp.	6 to 12	2	24 (0.39 lb ai/acre)	21

**Applications Directions.** Begin Willowood Pyrac 2EC applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high.

Willowood Pyrac 2EC can be used with adjuvants in oilseed crops. See **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

No livestock feeding restrictions.

**Resistance Management.** To limit development of resistance, **do not** apply more than 0.39 lb ai pyraclostrobin (24 fl ozs of Willowood Pyrac 2EC) per acre per season.

**Do not** make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a non-Group 11 fungicide with a different mode of action.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Instructions for In-furrow Use to Aid in the Control of Soilborne Rhizoctonia in Sunflower									
Rate per 1000 row feet (fl oz product)	Willowood Pyrac 2EC Rate (fl ozs/A)								
	15-inch rows	20-inch rows	22-inch rows	30-inch rows	32-inch rows	34-inch rows	36-inch rows	38-inch rows	40-inch rows
0.1	3.5								
0.2	7.0	5.2	4.7	3.5	3.3	3.2	3.0		
0.3	10.5	7.8	7.1	5.2	5.0	4.8	4.5	4.3	4.0
0.4	see footnote <sup>1</sup>	10.4	9.5	6.9	6.7	6.4	6.0	5.7	5.4
0.5	see footnote <sup>1</sup>	see footnote <sup>1</sup>	11.8	8.7	8.4	8.0	7.5	7.1	6.7
0.6	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	10.4	10.0	9.6	9.0	8.5	8.1
0.7	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	11.7	11.2	10.5	10.0	9.4
0.8	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	12.0	11.4	10.8
<b>Applications Directions.</b> Use 0.1 to 0.8 fl oz of Willowood Pyrac 2EC per 1000 row feet. Apply at planting as an in-furrow application by directing the spray into the furrow before seed is covered. Use a minimum application volume of 2.5 gallons of water per acre.  When Rhizoctonia seedling disease pressure conditions are expected to be severe or if the field has a history of seedling diseases, use Willowood Pyrac 2EC at a product rate per acre equivalent to 9 to 12 fl ozs and/or tank mix with a fungicide having a different mode of action.  <b>Do not</b> apply more than 12 fl ozs per acre of Willowood Pyrac 2EC.									
<sup>1</sup> For 32- to 34-inch rows, use a maximum of 0.7 fl oz per 1000 row feet. For 30-inch rows, use a maximum of 0.6 fl oz per 1000 row feet. For 22-inch rows, use a maximum of 0.5 fl oz per 1000 row feet. For 20-inch rows, use a maximum of 0.4 fl oz per 1000 row feet. For 15-inch rows, use a maximum of 0.3 fl oz per 1000 row feet.									

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Follar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Peanut	Early leaf spot <i>Cercospora arachidicola</i>	6 to 15 (see details below)	2	45 (0.73 lbs ai/acre)	14
	Late leaf spot <i>Cercosporidium personatum</i>				
	Pepperspot <i>Leptosphaerulina crassiasca</i>				
	Rust <i>Puccinia arachidis</i>				
	Web blotch <i>Phoma arachidicola</i>	9 to 15			
	Rhizoctonia limb rot,				

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
	Peg rot, Pod rot <i>Rhizoctonia solani</i>	12 to 15			
	Sclerotium rot, Southern stem rot, Southern blight, and White mold <i>Sclerotium rolfsii</i>				
	<b>Suppression Only:</b> Sclerotinia blight <i>Sclerotinia minor</i>				
	Cylindrocladium black rot <i>Cylindrocladium crotalariae</i>				

**Applications Directions.** For control of early and late leaf spot, pepperspot, rust and web blotch, begin Willowood Pyrac 2EC applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development. When using a 14-day spray interval, apply Willowood Pyrac 2EC at 6 to 12 fluid ounces per acre. At spray intervals between 14 and 21 days, apply Willowood Pyrac 2EC at 9 to 15 fluid ounces per acre.

**For control of Rhizoctonia and Sclerotium,** begin Willowood Pyrac 2EC applications prior to disease development and continue on a 14- to 28-day interval. For intervals greater than 14 days, use 15 fluid ounces per acre.

Use the higher rate and/or shorter interval when disease pressure is high or in fields with a history of disease.

Willowood Pyrac 2EC can be used with adjuvants in peanut; however, mixes with silicone-containing adjuvants may cause crop injury under certain conditions. See **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

Peanut meal can be fed. Do not graze or harvest for forage use.

**Resistance Management.** To limit development of resistance, **do not** apply more than 0.73 lb ai pyraclostrobin (45 fl ozs of Willowood Pyrac 2EC) per acre per season.

**Do not** make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a labeled non-Group 11 fungicide with a different mode of action. In spray programs where four (4) or less fungicide applications are made in a season, Willowood Pyrac 2EC should be alternated with at least one (1) application of a labeled non-Group 11 fungicide with a different mode of action.

\*The maximum product rate per season includes the combination of in-furrow and foliar uses.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Instructions for Infurrow Use to Aid in the Control of Soilborne Rhizoctonia in Peanut									
Rate per 1000 row feet (fl oz product)	Willowood Pyrac 2EC Rate (fl ozs/A)								
	15-inch rows	20-inch rows	22-inch rows	30-inch rows	32-inch rows	34-inch rows	36-inch rows	38-inch rows	40-inch rows
0.1	3.5								
0.2	7.0	5.2	4.7	3.5	3.3	3.2	3.0		
0.3	10.5	7.8	7.1	5.2	5.0	4.8	4.5	4.3	4.0

0.4	see footnote <sup>1</sup>	10.4	9.5	6.9	6.7	6.4	6.0	5.7	5.4
0.5	see footnote <sup>1</sup>	see footnote <sup>1</sup>	11.8	8.7	8.4	8.0	7.5	7.1	6.7
0.6	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	10.4	10.0	9.6	9.0	8.5	8.1
0.7	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	11.7	11.2	10.5	10.0	9.4
0.8	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	12.0	11.4	10.8

**Applications Directions.** Use 0.1 to 0.8 fl oz of Willowood Pyrac 2EC per 1000 row feet. Apply at planting as an in-furrow application by directing the spray into the furrow before seed is covered. Use a minimum application volume of 2.5 gallons of water per acre.

When Rhizoctonia seedling disease pressure conditions are expected to be severe or if the field has a history of seedling diseases, use Willowood Pyrac 2EC at a product rate per acre equivalent to 9 to 12 fl ozs and/or tank mix with a fungicide having a different mode of action.

**Do not** apply more than 12 fl ozs per acre of Willowood Pyrac 2EC.

<sup>1</sup>For 32- to 34-inch rows, use a maximum of 0.7 fl oz per 1000 row feet.

For 30-inch rows, use a maximum of 0.6 fl oz per 1000 row feet.

For 22-inch rows, use a maximum of 0.5 fl oz per 1000 row feet.

For 20-inch rows, use a maximum of 0.4 fl oz per 1000 row feet.

For 15-inch rows, use a maximum of 0.3 fl oz per 1000 row feet.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Pecan	Pecan scab <i>Cladosporium caryigenum</i>	6 to 7	2	28 (0.46 lb ai/acre)	14

**Applications Directions.** Begin Willowood Pyrac 2EC applications prior to disease development and continue on a 14-day interval. For optimum performance, apply Willowood Pyrac 2EC early in the spray program (e.g. prepollination and first cover).

**Resistance Management.** To limit development of resistance, **do not** apply more than 0.46 lb ai pyraclostrobin (28 fl ozs of Willowood Pyrac 2EC) per acre per season.

**Do not** make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a labeled non-Group 11 fungicide with a different mode of action.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Potato	Black dot <i>Colletotrichum coccodes</i>  Early blight <i>Alternaria solani</i>	6 to 9	1	72 (1.18 lbs ai/acre)	3

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
	Late blight <i>Phytophthora infestans</i>  Powdery mildew <i>Erysiphe</i> spp. <i>Leveillula taurica</i>  <u><b>Suppression Only:</b></u> White mold <i>Sclerotinia sclerotiorum</i>	6 to 12			

**Applications Directions.** Begin Willowood Pyrac 2EC applications at 7- to 14-day intervals prior to disease development. The low rate and longer interval can be used early season prior to the observance of symptoms and when disease pressure is low. **For control of late blight**, follow Willowood Pyrac 2EC application with a labeled non-Group 11 fungicide with a different mode of action 5 to 7 days later.

Use the higher rates and/or shorter intervals once disease has been confirmed in your area or weather conditions are favorable to disease development.

No livestock feeding restrictions.

**Resistance Management.** To limit development of resistance, **do not** apply more than 1.18 lbs ai pyraclostrobin (72 fl ozs of Willowood Pyrac 2EC) per acre per season.

**Do not** make more than one (1) Willowood Pyrac 2EC application before alternating to a labeled non-Group 11 fungicide with a different mode of action.

\*The maximum product rate per season includes the combination of in-furrow and foliar uses.

### In-furrow Use to Aid in the Control of Soilborne Rhizoctonia in Potatoes

Use 0.4 to 0.8 fl oz of Willowood Pyrac 2EC per 1000 row feet. For applications on 32-inch or 34-inch rows, the maximum application rate is 0.73 fl oz/1000 row feet. Apply at planting as an in-furrow spray by directing spray pattern to uniformly cover seed pieces and surrounding soil. The spray pattern must be a 4- to 8-inch band applied to the seed piece prior to being covered with soil.

When Rhizoctonia disease pressure conditions are expected to be severe or if the field has a history of Rhizoctonia infestations, use Willowood Pyrac 2EC at 0.6 to 0.8 fl oz per 1000 row feet and/or tank mix with a fungicide having a different mode of action.

**Do not** apply more than 12 fl ozs per acre of Willowood Pyrac 2EC.

**Use a minimum volume of application of 5 gallons of water per acre.**

Willowood Pyrac 2EC Rate per 1000 row feet (fl oz product)	Willowood Pyrac 2EC Rate (fl ozs/A)				
	32-inch rows	34-inch rows	36-inch rows	38-inch rows	40-inch rows
0.4	6.7	6.4	6.0	5.7	5.4
0.6	10.0	9.6	9.0	8.6	8.1
0.8	see footnote <sup>1</sup>	see footnote <sup>1</sup>	12.0	11.4	10.8

<sup>1</sup>For 32-inch or 34-inch rows, use a maximum of 0.73 fl oz per 1000 row feet.



**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Rye	Leaf rust <i>Puccinia recondita</i>  Leaf spot <i>Pyrenophora</i> spp.  Powdery mildew <i>Erysiphe graminis</i>  Septoria leaf and glume blotch <i>Septoria</i> spp., <i>Stagonospora</i> spp.  Stem rust <i>Puccinia graminis</i>  Stripe rust <i>Puccinia striiformis</i>	6 to 9*	2	18 (0.29 lb ai/acre)	Apply no later than 50% head emergence (Feekes 10.3, Zadok's 55)

**Applications Directions.** Begin Willowood Pyrac 2EC applications prior to disease development. To maximize yields in cereals, protect the flag leaf. Apply Willowood Pyrac 2EC immediately after flag-leaf emergence for optimum results.

Willowood Pyrac 2EC does not control Fusarium head blight (head scab) or prevent the reduction in grain quality that can result from this disease. When head blight is a concern, manage this disease with fungicides that are labeled for and effective in managing this disease, and with cultural practices like crop rotation and plowing to reduce crop residues that serve as an inoculum source.

No livestock feeding restrictions.

**Resistance Management.** To limit development of resistance, **do not** apply more than 0.29 lb ai pyraclostrobin (18 fl ozs of Willowood Pyrac 2EC) per acre per season.

**Do not** make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a labeled non-Group 11 fungicide with a different mode of action.

\*For early season control of leaf spot and Septoria leaf and glume blotch when conditions favor disease development, apply 3 to 6 fl ozs per acre of Willowood Pyrac 2EC either in combination with a herbicide application or when conditions favor disease development. When the 3 to 6 fl ozs early season application rate is used, a second application of Willowood Pyrac 2EC may be required to protect the emerged flag leaf. Environmental conditions for disease or current disease pressure at the time of flag-leaf emergence should be used to determine the Willowood Pyrac 2EC rate for the second application. For high disease pressure, use the higher rate of Willowood Pyrac 2EC. Early season control is not registered for use in California.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
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Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Sorghum	Anthracnose <i>Colletotrichum graminicola</i>  Gray leaf spot <i>Cercospora</i> spp.  Northern leaf blight <i>Excerohilum turcicum</i>  Rust <i>Puccinia</i> spp.  Southern leaf blight <i>Bipolaris</i> spp.	6 to 12	1	12 (0.20 lb ai/acre)	Apply no later than 25% flowering
<p><b>Applications Directions.</b> Begin Willowood Pyrac 2EC applications prior to disease development.</p> <p>Use the higher rate when disease pressure is high.</p> <p>Under high disease pressure for Northern leaf blight and Southern leaf blight, apply 9 to 12 fl ozs per acre.</p> <p><b>Resistance Management.</b> To limit development of resistance, <b>do not</b> apply more than 0.20 lb ai pyraclostrobin (12 fl ozs of Willowood Pyrac 2EC) per acre per season.</p> <p><b>Do not</b> make more than one (1) Willowood Pyrac 2EC application per season. If additional fungicide applications are needed, use a labeled non-Group 11 fungicide with a different mode of action.</p>					

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Soybean	Alternaria leaf spot <i>Alternaria</i> spp.  Anthracnose <i>Colletotrichum truncatum</i>  Asian soybean rust <i>Phakopsora pachyrhizi</i>  Brown spot <i>Septoria glycines</i>  Cercospora blight <i>Cercospora kikuchii</i>  Frogeye leaf spot <i>Cercospora soja</i>	6 to 12	2	24 (0.39 lb ai/acre)	21

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
	Pod and stem blight <i>Diaporthe phaseolorum</i>				
	Rhizoctonia aerial blight <i>Rhizoctonia solani</i>				
	<b>Suppression Only:</b> Southern blight <i>Sclerotium rolfsii</i>	12			

**Applications Directions.** Begin Willowood Pyrac 2EC applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high.

For control of soybean rust, apply Willowood Pyrac 2EC prior to infection.

Willowood Pyrac 2EC can be used with adjuvants in soybeans. See **Additives and Tank Mixing Information** and **Mixing Order** sections for more details.

Soybean forage can be fed no sooner than 14 days after last application.

Soybean hay can be fed no sooner than 21 days after last treatment.

**Resistance Management.** To limit development of resistance, **do not** apply more than 0.39 lb ai pyraclostrobin (24 fl ozs of Willowood Pyrac 2EC) per acre per season.

**Do not** make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a labeled non-Group 11 fungicide with a different mode of action.

\*The maximum product rate per season includes the combination of in-furrow and foliar uses.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Instructions for In-furrow Use to Aid in the Control of Soilborne Rhizoctonia in Soybean									
Rate per 1000 row feet (fl oz product)	Willowood Pyrac 2EC Rate (fl ozs/A)								
	15-inch rows	20-inch rows	22-inch rows	30-inch rows	32-inch rows	34-inch rows	36-inch rows	38-inch rows	40-inch rows
0.1	3.5								
0.2	7.0	5.2	4.7	3.5	3.3	3.2	3.0		
0.3	10.5	7.8	7.1	5.2	5.0	4.8	4.5	4.3	4.0
0.4	see footnote <sup>1</sup>	10.4	9.5	6.9	6.7	6.4	6.0	5.7	5.4
0.5	see footnote <sup>1</sup>	see footnote <sup>1</sup>	11.8	8.7	8.4	8.0	7.5	7.1	6.7
0.6	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	10.4	10.0	9.6	9.0	8.5	8.1
0.7	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	11.7	11.2	10.5	10.0	9.4
0.8	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	12.0	11.4	10.8
<b>Applications Directions.</b> Use 0.1 to 0.8 fl oz of Willowood Pyrac 2EC per 1000 row feet. Apply at planting as an in-furrow application by directing the spray into the furrow before seed is covered. Use a minimum application volume of 2.5 gallons of water per acre.									
When Rhizoctonia seedling disease pressure conditions are expected to be severe or if the field has a									

history of seedling diseases, use Willowood Pyrac 2EC at a product rate per acre equivalent to 9 to 12 fl ozs and/or tank mix with a fungicide having a different mode of action.

**Do not** apply more than 12 fl ozs per acre of Willowood Pyrac 2EC.

<sup>1</sup>For 32- to 34-inch rows, use a maximum of 0.7 fl oz per 1000 row feet.

For 30-inch rows, use a maximum of 0.6 fl oz per 1000 row feet.

For 22-inch rows, use a maximum of 0.5 fl oz per 1000 row feet.

For 20-inch rows, use a maximum of 0.4 fl oz per 1000 row feet.

For 15-inch rows, use a maximum of 0.3 fl oz per 1000 row feet.

**Table 2. Willowood Pyrac 2EC fungicide Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
<b>Succulent Shelled Peas and Beans</b>	Alternaria leaf and pod spot <i>Alternaria</i> spp.	6 to 9	2	18 (0.29 lb ai/acre)	7
Pigeon pea	Anthracnose <i>Colletotrichum</i> spp.				
<i>Vigna</i> spp.					
Black-eyed pea	Ascochyta blight				
Cowpea	<i>Phoma exigua</i>				
Southern pea	<i>Ascochyta</i> spp.				
<i>Pisum</i> spp.					
Broad bean	Asian soybean rust				
English pea	<i>Phakopsora pachyrhizi</i>				
Garden pea					
Green pea	Cercospora leaf spot <i>Cercospora</i> spp.				
<b>Phaseolus</b> spp.					
Lima bean, green	Downy mildew <i>Phytophthora nicotianae</i> , <i>P. phaseoli</i>				
	Mycosphaerella blight <i>Mycosphaerella</i> spp.				
	Powdery mildew <i>Erysiphe polygoni</i>				
	Rust <i>Uromyces appendiculatus</i>				

**Applications Directions.** Begin Willowood Pyrac 2EC applications prior to disease development and continue on a 7- to 14-day interval if conditions are favorable for disease development.

Use the higher rate and shorter interval when disease pressure is high.

Bean forage, bean hay, pea vines, and pea hay may be fed no sooner than 14 days after last application.

Willowood Pyrac 2EC can be used with adjuvants in succulent shelled peas and beans. See **Additives**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
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and Tank Mixing Information and Mixing Order sections for more details.

**Resistance Management.** To limit development of resistance, **do not** apply more than 0.29 lb ai pyraclostrobin (18 fl ozs of Willowood Pyrac 2EC) per acre per season.

**Do not** make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a labeled non-Group 11 fungicide with a different mode of action.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
<b>Sugar Beet (roots and tops)</b>	Cercospora leaf spot <i>Cercospora beticola</i>	9 to 12	2	48 (0.78 lb ai/acre)	7
	Powdery mildew <i>Erysiphe betae</i>				

**Applications Directions.** Begin Willowood Pyrac 2EC applications prior to disease development and continue on a 14-day interval.

Use the higher rate when disease pressure is high.

Willowood Pyrac 2EC applications will aid in the control of Rhizoctonia stem canker and crown rot.

In sugar beet, Willowood Pyrac 2EC can be combined with low rates of crop oil concentrate (COC), methylated seed oil (MSO), and nonionic surfactant (NIS) adjuvants. **Do not** use silicone-containing adjuvants. Some combinations and rates may result in temporary crop injury.

**Willowood Pyrac 2EC Tank Mixes.** Willowood Pyrac 2EC can be tank mixed with herbicides such as Poast® herbicide, Select® herbicide (or Willowood Clethodim 2EC), Assure® II herbicide or Prism® herbicide for postemergence control of grasses in sugar beet. **Do not** use silicone-based adjuvants in such combinations. Willowood Pyrac 2EC tank mix combinations can include COC or MSO; however, crop injury may result. The level of injury tends to increase with increasing rates of COC or MSO.

See **Additives and Tank Mixing Information and Mixing Order** sections for more details.

No livestock feeding restrictions.

**Resistance Management.** To limit development of resistance, **do not** apply more than 0.78 lb ai pyraclostrobin (48 fl ozs of Willowood Pyrac 2EC) per acre per season.

**Do not** make more than one (1) Willowood Pyrac 2EC application before the 4-leaf stage of plant growth. After the 4-leaf stage of plant growth, **do not** make more than (1) Willowood Pyrac 2EC application before alternating to a labeled non-Group 11 fungicide with a different mode of action.

\*The maximum product rate per season includes the combination of in-furrow and foliar uses.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Instructions for In-furrow Use to Aid in the Control of Soilborne Rhizoctonia in Sugar Beet									
Rate per 1000 row feet (fl oz product)	Willowood Pyrac 2EC Rate (fl ozs/A)								
	15-inch rows	20-inch rows	22-inch rows	30-inch rows	32-inch rows	34-inch rows	36-inch rows	38-inch rows	40-inch rows
0.1	3.5								
0.2	7.0	5.2	4.7	3.5	3.3	3.2	3.0		
0.3	10.5	7.8	7.1	5.2	5.0	4.8	4.5	4.3	4.0
0.4	see footnote <sup>1</sup>	10.4	9.5	6.9	6.7	6.4	6.0	5.7	5.4
0.5	see footnote <sup>1</sup>	see footnote <sup>1</sup>	11.8	8.7	8.4	8.0	7.5	7.1	6.7
0.6	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	10.4	10.0	9.6	9.0	8.5	8.1
0.7	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	11.7	11.2	10.5	10.0	9.4
0.8	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	see footnote <sup>1</sup>	12.0	11.4	10.8

**Applications Directions.** Use 0.1 to 0.8 fl oz of Willowood Pyrac 2EC per 1000 row feet. Apply at planting as an in-furrow application by directing the spray into the furrow before seed is covered. Use a minimum application volume of 2.5 gallons of water per acre.

When Rhizoctonia seedling disease pressure conditions are expected to be severe or if the field has a history of seedling diseases, use Willowood Pyrac 2EC at a product rate per acre equivalent to 9 to 12 fl ozs and/or tank mix with a fungicide having a different mode of action.

**Do not** apply more than 12 fl ozs per acre of Willowood Pyrac 2EC.

<sup>1</sup>For 32- to 34-inch rows, use a maximum of 0.7 fl oz per 1000 row feet.  
 For 30-inch rows, use a maximum of 0.6 fl oz per 1000 row feet.  
 For 22-inch rows, use a maximum of 0.5 fl oz per 1000 row feet.  
 For 20-inch rows, use a maximum of 0.4 fl oz per 1000 row feet.  
 For 15-inch rows, use a maximum of 0.3 fl oz per 1000 row feet.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Sugarcane	Brown Rust <i>Puccinia melanocephala</i>  Orange Rust <i>Puccinia kuehnii</i>	9 to 12	2	48 (0.78 lb ai/acre)	14

**Applications Directions.** For optimal disease control, begin applications of Willowood Pyrac 2EC prior to disease development and continue on a 14- to 28-day interval if conditions are conducive for disease development. Use the higher rate and shorter interval when disease pressure is high.

**Resistance Management.** To limit the potential for development of resistance, **do not** apply more than 48 fl ozs of Willowood Pyrac 2EC per acre per season. **Do not** make more than two (2) sequential applications of Willowood Pyrac 2EC before alternating to a labeled non-Group 11 fungicide with a different mode of action.

**Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)**

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
<b>Tuberous and Corm Vegetables Subgroup</b> Arracacha Arrowroot Chinese artichoke Jerusalem artichoke Cassava (bitter and sweet) Chayote (root) Chufa Dasheen Edible canna Ginger Leren Sweet Potato Tanier True yam Turmeric Yam bean	Downy mildew <i>Plasmopara</i> spp.  Leaf spot <i>Cercospora</i> spp., <i>Alternaria</i> spp.  Powdery mildew <i>Erysiphe</i> spp., <i>Leveillula taurica</i>  Rust <i>Uromyces</i> spp., <i>Puccinia</i> spp.	6 to 12	1	72 (1.18 lbs ai/acre)	3
	Black dot <i>Colletotrichum coccodes</i>  Early blight <i>Alternaria solani</i>  Late blight <i>Phytophthora infestans</i>  Powdery mildew <i>Erysiphe</i> spp., <i>Leveillula taurica</i>  <u><b>Suppression Only:</b></u> White mold <i>Sclerotinia sclerotiorum</i>	6 to 9			

**Applications Directions.** Begin Willowood Pyrac 2EC applications at 7- to 14-day intervals prior to disease development. The low rate and longer interval can be used early season prior to the observance of symptoms and when disease pressure is low. **For control of late blight**, follow Willowood Pyrac 2EC application with a labeled fungicide with a different mode of action 5 to 7 days later.

Use the higher rates and shorter intervals once disease has been confirmed in your area or if weather conditions are favorable for disease development.

No livestock feeding restrictions.

**Resistance Management.** To limit development of resistance, **do not** apply more than 1.18 lbs ai pyraclostrobin (72 fl ozs of Willowood Pyrac 2EC) per acre per season.

**Do not** make more than one (1) Willowood Pyrac 2EC application before alternating to a labeled non-

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Group 11 fungicide with a different mode of action.					
*The maximum product rate per season includes the combination of in-furrow and foliar uses. (For above-listed crops, in-furrow use is permitted in potato only.)					

### In-furrow Use to Aid in the Control of Soilborne Rhizoctonia in Potatoes

Use 0.4 to 0.8 fl oz of Willowood Pyrac 2EC per 1000 row feet. For applications on 32-inch or 34-inch rows, the maximum application rate is 0.73 fl oz/1000 row feet. Apply at planting as an in-furrow spray by directing spray pattern to uniformly cover seed pieces and surrounding soil. The spray pattern must be a 4- to 8-inch band applied to the seed piece prior to being covered with soil.

When Rhizoctonia disease pressure conditions are expected to be severe or if the field has a history of Rhizoctonia infestations, use Willowood Pyrac 2EC at 0.6 to 0.8 fl oz per 1000 row feet and/or tank mix with a fungicide having a different mode of action.

Do not apply more than 12 fl ozs per acre of Willowood Pyrac 2EC.

Use a minimum volume of application of 5 gallons of water per acre.

Willowood Pyrac 2EC Rate per 1000 row feet (fl oz product)	Willowood Pyrac 2EC Rate (fl ozs/A)				
	32-inch rows	34-inch rows	36-inch rows	38-inch rows	40-inch rows
0.4	6.7	6.4	6.0	5.7	5.4
0.6	10.0	9.6	9.0	8.6	8.1
0.8	see footnote <sup>1</sup>	see footnote <sup>1</sup>	12.0	11.4	10.8
<sup>1</sup> For 32-inch or 34-inch rows, use a maximum of 0.73 fl oz per 1000 row feet.					

Table 2. Willowood Pyrac 2EC Crop-specific Requirements (cont'd)

Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
Wheat and Triticale	Black point Kernal smudge <i>Alternaria</i> spp., <i>Helminthosporium</i> spp.	6 to 9*	2	18 (0.29 lb ai/acre)	Apply no later than the beginning of flowering (Feekes 10.5, Zadok's 59)
	Leaf rust <i>Puccinia tritica</i>				
	Powdery mildew <i>Erysiphe graminis</i> f. sp., <i>tritici</i>				
	Septoria leaf and glume blotch <i>Septoria</i> spp., <i>Stagonospora</i> spp.				



Crop	Target Disease	Product Rate per Application (fl ozs/A)	Maximum Number of Sequential Foliar Applications	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
	Spot blotch <i>Cochliobolus sativus</i>				
	Stem rust <i>Puccinia graminis f. sp., tritici</i>				
	Stripe rust <i>Puccinia striiformis f. sp., tritici</i>				
	Tan spot Yellow leaf spot <i>Pyrenophora</i> spp.				

**Applications Directions.** Begin Willowood Pyrac 2EC applications prior to disease development. To maximize yields in cereals, protect the flag leaf. Apply Willowood Pyrac 2EC immediately after flag-leaf emergence for optimum results.

Willowood Pyrac 2EC does not control Fusarium head blight (head scab) or prevent the reductions in grain quality that can result from this disease. When head blight is a concern, manage this disease with fungicides that are labeled for and effective in managing this disease, and with cultural practices like crop rotation and plowing to reduce crop residues that serve as an inoculum source.

**Do not** harvest wheat hay or feed green-chopped wheat within 14 days after last application.

**Resistance Management.** To limit development of resistance, **do not** apply more than 0.29 lb ai pyraclostrobin (18 fl ozs Willowood Pyrac 2EC) per acre per season.

**Do not** make more than two (2) sequential Willowood Pyrac 2EC applications before alternating to a labeled non-Group 11 fungicide with a different mode of action.

\*For early season control of tan spot, Septoria leaf and glume blotch, and spot blotch when conditions favor disease development, apply 3 to 6 fl ozs per acre of Willowood Pyrac 2EC either in combination with a herbicide application or when conditions favor disease development. When the 3 to 6 fl ozs early season application rate is used, a second application of Willowood Pyrac 2EC may be required to protect the emerged flag leaf. Environmental conditions for disease or current disease pressure at the time of flag-leaf emergence should be used to determine the Willowood Pyrac 2EC rate for the second application. For high disease pressure, use the higher rate of Willowood Pyrac 2EC. Early season control is not registered for use in California.

## STORAGE AND DISPOSAL

**Do not** contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE:** Store in original containers only. Keep container closed when not in use. **Do not** store near food or feed.

**PESTICIDE DISPOSAL:** Wastes resulting from use of this product may be disposed of on-site or at an approved waste disposal facility. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER HANDLING:**

**[Nonrefillable Container (five gallons or less):]** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

**[Nonrefillable Container (greater than five gallons):]** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

**Steps to be taken in case material is released or spilled:**

- In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to label.
- Dike and contain the spill with inert materials (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

**CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Willowood, LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Willowood, LLC and Seller harmless for any claims relating to such factors.

Willowood, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Willowood, LLC, and Buyer and User assume the risk of any such use. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, WILLOWOOD, LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

To the extent consistent with applicable law, neither Willowood, LLC nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF WILLOWOOD, LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE**

**PRICE OF THE PRODUCT OR, AT THE ELECTION OF WILLOWOOD, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

Willowood, LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of Willowood, LLC.

Cabrio, Headline, Poast and Pristine are registered trademarks of BASF.

Assure and Prims are registered trademarks of E.I. DuPont de Nemours and Company.

Select is a registered trademark of Arysta Life Science North America Corporation.

[EPA approval date]

## {LANGUAGE ON LABEL AFFIXED TO CONTAINER}

### WILLOWOOD PYRAC 2EC FUNGICIDE

#### ACTIVE INGREDIENT\*:

Pyraclostrobin: (carbamic acid, [2-[[[1-(4-chlorophenyl)-1H-pyrazol-3-yl]oxy]methyl]phenyl]

methoxy-, methyl ester)..... 23.6%

OTHER INGREDIENTS\*\*..... 76.4%

TOTAL:..... 100.0%

\*Equivalent to 2.09 pounds of pyraclostrobin per gallon.

\*\*Contains petroleum distillates.

### KEEP OUT OF REACH OF CHILDREN

## WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand this label, find someone to explain it to you in detail).

#### FIRST AID

If swallowed	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Do not give any liquid to the person.</li><li>• Do not induce vomiting unless told to by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
If on skin or clothing	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
If in eyes	<ul style="list-style-type: none"><li>• Hold eyes open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
If inhaled	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth-to-mouth, if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>

#### HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For general information on product use, etc., call the National Pesticides Information Center (NPIC) at 1-800-858-7378 Mon. - Fri. 8:00 am to 12:00 pm Pacific Time. For emergencies, call the poison control center at 1-800-222-1222.

**NOTE TO PHYSICIAN:** Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

#### PRECAUTIONARY STATEMENTS

##### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

May be fatal if swallowed. Causes substantial but temporary eye irritation. Causes skin irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing.

## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE:** Store in original containers only. Keep container closed when not in use. Do not store near food or feed.

**PESTICIDE DISPOSAL:** Wastes resulting from use of this product may be disposed of on-site or at an approved waste disposal facility. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the

Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER HANDLING:** [Nonrefillable Container (five gallons or less):] Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

[Nonrefillable Container (greater than five gallons):] Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

See label booklet for additional Precautionary Statements and Directions for Use.

EPA Reg. No. 87290-xx

EPA Est. No.

#### Manufactured for:

Willowood, LLC

1600 NW Garden Valley Blvd. #120

Roseburg, OR 97471

#### Net Contents:

#### 4 **Reeves, Craig**

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**From:** Mike Kellogg <Mike@PyxisRC.com>  
**Sent:** Monday, August 29, 2016 6:04 PM  
**To:** Reeves, Craig  
**Subject:** RE: 87290-AU: LRM Chapter 10; plus additional  
**Attachments:** 087290-xxxx.20160829v2.Willowood Pyrac 2EC lbl.tracked changes.pdf; 087290-xxxx.20160829v2.Willowood Pyrac 2EC lbl.changes incorporated.pdf

Craig,

I've attached both a tracked changes and clean version of the 87290-AU label incorporating your comments with the exceptions below:

- I believe the label is in compliance with LRM Chapter 10.
- The additional citrus fruit do appear on the me-too label dated September 5, 2013.
- The rate on page 28 was changed on the me-too label dated September 5, 2013.

Regards,  
Mike Kellogg  
Pyxis Regulatory Consulting, Inc.  
4110 136<sup>th</sup> St. Ct. NW  
Gig Harbor, WA 98332  
T: 253-853-7369  
F: 253-853-5516

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**From:** Reeves, Craig [mailto:Reeves.Craig@epa.gov]  
**Sent:** Monday, August 29, 2016 10:45 AM  
**To:** Mike Kellogg  
**Subject:** RE: 87290-AU: LRM Chapter 10; plus additional

Mike:

Also add under, "Physical and Chemical Hazards":

"Do not mix or allow contact with oxidizing agents. Hazardous chemical reaction may occur."

This is a requirement coming from the 45/90 day screen.

Thanks -- Craig

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**From:** Reeves, Craig  
**Sent:** Monday, August 29, 2016 12:47 PM  
**To:** 'Mike Kellogg' <Mike@PyxisRC.com>  
**Subject:** RE: 87290-AU: LRM Chapter 10; plus additional

Mike:

Some additional comments on the label below (29Aug16):

\*Either bold or capitalize "Do Not" & "do not" wording where needed; see me-too for guidance.

Page 2: In "if swallowed" sentence should read "Do not give anything by mouth to an unconscious person."  
This is a recent reversal from EPA attorneys.

Page 2: From LRM 7-13 (c), "Note to Physician", Delete "Probable mucosal damage may contraindicate the use of gastric lavage", and replace with "Contains petroleum distillate. Vomiting may cause aspiration pneumonia."

Page 14: under 'Citrus Fruits Group', the following have been added: Australian desert lime, Australian finger lime, Australian round lime, and Brown River finger lime. Where did they come from as they are not on 7969-186 (me-too)?

Page 28: under "Resistance Management", the me-too has "1.22 lbs ai", while the proposed label is "0.73 lb ai"?

Thanks – Craig  
703 347-0486

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**From:** Reeves, Craig  
**Sent:** Monday, August 29, 2016 9:57 AM  
**To:** 'Mike Kellogg' <[Mike@PyxisRC.com](mailto:Mike@PyxisRC.com)>  
**Subject:** 87290-AU: LMR Chapter 10

Mike:

Were LMR Chapter 10 comments added to the proposed label? Chapter 10 was revised February 2016.

Craig

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**From:** Reeves, Craig  
**Sent:** Wednesday, May 18, 2016 8:22 AM  
**To:** Mike Kellogg <[Mike@PyxisRC.com](mailto:Mike@PyxisRC.com)>  
**Subject:** 87290-AU: Similarity Clinic memo: revise Data Matrix required

Mike:

Thanks for the information. I was given the 07/23/2013 (no "sugarcane") label by mistake; thanks for the correction. I should be getting back to you by next week with comments.

Regard – Craig

---

**From:** Mike Kellogg [<mailto:Mike@PyxisRC.com>]  
**Sent:** Tuesday, May 17, 2016 2:11 PM

**To:** Reeves, Craig <[Reeves.Craig@epa.gov](mailto:Reeves.Craig@epa.gov)>

**Subject:** RE: 87290-AU: Similarity Clinic memo: revise Data Matrix required

Craig,

Revised data matrices attached.

We me-too'd EPA Reg. No. 7969-186. The most recent label on PPLS is dated September 5, 2013 and lists sugarcane (p. 37 of label, p. 50 of 54 of attached).

Regards,

Mike Kellogg

Pyxis Regulatory Consulting, Inc.

4110 136<sup>th</sup> St. Ct. NW

Gig Harbor, WA 98332

T: 253-853-7369

F: 253-853-5516

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**From:** Reeves, Craig [<mailto:Reeves.Craig@epa.gov>]

**Sent:** Tuesday, May 17, 2016 9:44 AM

**To:** Mike Kellogg

**Subject:** 87290-AU: Similarity Clinic memo: revise Data Matrix required

Michael Kellogg

Pyxis Regulatory Consulting, Inc.

4110 136<sup>th</sup> St. Ct. NW

Gig Harbor, WA 98332

Mr. Kellogg:

Please see attached Agency preliminary review. We will need a revised Data Matrix, the Product Chemistry MRIDs are acceptable, but the Acute Toxicity MRIDs are not; reference the six (6) MRIDs # on page 2 for inclusion to the revised Data Matrix. Please submit the revised Data Matrix (with current date) to me as soon as possible; once I receive the revised Data Matrix I can send the package to Product Chemistry for review.

In addition let me know which product label "sugarcane" came from, as it is not on the "me-too" label.

Regards – Craig Reeves



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

FEE

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

REGISTRATION DIVISION (7505P)

~~DOCUMENT CONTAINS CONFIDENTIAL BUSINESS INFORMATION~~

DP BARCODE.: D433741; FILE SYMBOL NO.: 87290-AU; DECISION No.: 516911; FOOD USE: Yes  
PC CODE: 099100; ACTION CODE: R 301; PRODUCT NAME: Willowood Pyrac 2EC;

DATE OUT: July 5, 2016

SUBJECT: Product Chemistry Review of Product Name: Willowood Pyrac 2EC

FROM: Akiva Abramovitch, Ph.D.  
CITAB / RD (7505P)

*AK*

THROUGH: Shyam B. Mathur, Ph.D.  
Product Chemistry Team Leader  
CITAB / RD (7505P)

*SBM 7-12-16*

TO: Craig Reeves / Tony Kish PM 22  
Fungicide Branch / Registration Division (7505P)

INTRODUCTION:

The registrant is submitting an application to register the proposed end-use product Willowood Pyrac 2EC containing Pyraclostrobin at a nominal concentration of 23.6% a.i. The registrant states that the proposed product is substantially similar to EPA Reg. No. 7969-186. In support of the application the registrant submitted product chemistry data in MRID#s 498971-01 through 498971-03. Also submitted in support of this request, a proposed basic CSF dated May 2, 2016 and a draft label.

SUMMARY OF FINDINGS:

1. Name of Active Ingredient: Pyraclostrobin (23.6% ai)

2. Has the registrant claimed substantial similarity to a registered product?

[X] Yes; [ ] No; [ ] NA; if yes give the registration number of the cited product.

EPA Reg. No. 7969-186

3. All of the source materials of the active ingredient are derived from registered sources- [X] Yes [ ] No

4. All inert ingredients have been screened by IAB and are approved for the proposed labeled uses.

[X] Yes [ ] No



**DP BARCODE.: D433741; FILE SYMBOL NO.: 87290-AU; DECISION No.: 516911; FOOD USE: Yes**  
**PC CODE: 099100; ACTION CODE: R 301; PRODUCT NAME: Willowood Pyrac 2EC;**

**5. Confidential Statement of Formula:**

☒ Basic - Dated: May 2, 2016

Resubmitted Dated:

☐ Alternate - Dated:

Resubmitted Dated:

Alternate CSF complies with 40 CFR 152.43

☐ Yes ☐ No ☒ NA

**6. Product label**

- a. Ingredient statement: Nominal concentration of AI listed on CSF concurs with product label (PR Notice 91-2).

☒ Yes, if not, explain below:

Is the sub statement in compliance with PR Notice 97-6 (inert ingredient vs other ingredient)

☒ Yes; ☐ No; if not, explain below

Metallic equivalent: ☐ Yes ☒ NA

Soluble arsenic: ☐ Yes ☒ NA

Isomeric ratios: ☐ Yes ☒ NA

Acid Equivalent: ☐ Yes ☒ NA

- b. Health related sub statements: Product contains?

Petroleum distillate at > 10%: ☒ Yes; ☐ No; ☐ NA

Methanol at > 4%: ☐ Yes; ☐ No; ☒ NA

Sodium nitrate/sodium nitrite ☐ Yes; ☐ No; ☒ NA

- c. Physical chemical hazard statement: Product label requires a statement per 40 CFR §156.78 for: flammability, explosive potential or electric insulator breakdown?

☐ Yes ☒ No

Is the sub statement in compliance with PR Notice 98-6 (Total Release Fogger)?

☐ Yes; ☐ No; ☒ NA; if not, explain below

- d. Label requires an additional Storage and Disposal statement: ☐ Yes ☒ No; if yes explain below:

DP BARCODE.: D433741; FILE SYMBOL NO.: 87290-AU; DECISION No.: 516911; FOOD USE: Yes  
PC CODE: 099100; ACTION CODE: R 301; PRODUCT NAME: Willowood Pyrac 2EC;

7. Group A: Product Chemistry Data

TRB's determination of the acceptability for the proposed product is listed in the tables below.

Guideline No.	Study Title		Data submitted		TRB's Assessment of Data	MRID Nos.
			Yes	No		
830.1550	Product Identity & Composition		X		A	498971-01
830.1600	Description of materials used to produce the product		X		A	498971-01
830.1650	Description of formulation process		X		A	498971-01
830.1670	Discussion on the formation of impurities		X		A	498971-01
830.1700	Preliminary analysis			X	NA	498971-01
830.1750	Certified limits (158.350)	Standard certified limits	X			498971-01
		Proposed Limits				
		Justification for wider limits	X		A	
830.1800	Enforcement analytical method		X		A	498971-01

A = Acceptance, N = Not Acceptable, G = Data Gap, W = Waiver Request, I = In Progress, NA = Not Applicable; U = Upgradeable.

DP BARCODE.: D433741; FILE SYMBOL NO.: 87290-AU; DECISION No.: 516911; FOOD USE: Yes  
PC CODE: 099100; ACTION CODE: R 301; PRODUCT NAME: Willowood Pyrac 2EC;

8. Group B:

Guideline No.	Study Title	Value or Qualitative Description	TRB's Assessment of Data	MRID Nos.
830.6303	Physical State	Clear brownish yellow liquid with a mildly sour odor	A	498971-02
830.6314	Oxidation/Reduction	Product is water based Expected to compatible when mixed with water, ammonium phosphate, Fe powder and hydrocarbon solvent. Not compatible with 5% potassium permanganate with 9 C elevation within one minute	A	498971-02
830.6315	Flammability	Not flammable-Above 230 F	A	498971-02
830.6316	Explodability	Product does not contain explosive properties.	W	
830.6317	Storage stability	Not submitted	G	
830.6320	Corrosion Characteristics	Not submitted	G	
830.7000	pH	4.6 at 25 C	A	498971-02
830.7100	Viscosity	28.1 cP at 25 C.	A	498971-02
830.7300	Density (units)	1.05 g/cm <sup>3</sup> at 25 C	A	498971-02

A = Acceptance, N = Not Acceptable, G = Data Gap, W = Waiver request, NA = Not applicable, I = In progress;  
U = Upgradeable.

**DP BARCODE.: D433741; FILE SYMBOL NO.: 87290-AU; DECISION No.: 516911; FOOD USE: Yes  
PC CODE: 099100; ACTION CODE: R 301; PRODUCT NAME: Willowood Pyrac 2EC;**

**CONCLUSIONS:**

CITAB has reviewed the product chemistry data submitted/cited for the end-use product and has concluded that:

**A. Substantial similarity to the cited product (Reg. No. 7969-186) from Product chemistry view point**

- ☒ Similar  
☐ Not similar, give reasons:  
☐ Identical  
☐ Not identical  
☐ Not applicable

**B. Confidential Statement of formula**

- ☒ Basic CSF (dated May 2, 2016)  
☒ Acceptable  
☐ Not Acceptable  
☐ Not Applicable

If not acceptable provide the reasons

Alternate CSF #1 (); Alternate CS #2 ()

- ☐ Acceptable -  
☐ Not Acceptable -  
☒ Not Applicable

If not acceptable give reasons

**C. Group A Product Chemistry Data**

- ☒ Acceptable  
☐ Not acceptable  
☐ Acceptable with the exception of Guideline(s): (provide the guideline number & explain)  
☐ Not required  
☐ Data cited

**D. Group B Product chemistry data**

- ☐ Acceptable  
☐ Not acceptable  
☒ Acceptable with the exception of Guideline(s): (6317 and 6320 not submitted)  
☐ Not required  
☒ Data cited

**E. Product Label/Draft Label**

Recommendations – Yes ☒; No ☐

Since the product is not compatible when mixed with potassium permanganate and a 26°C increase in temperature was observed, the registrant must add the following warning to the product label under Physical & Chemical hazards:

"Do not mix or allow contact with oxidizing agents. Hazardous chemical reaction may occur".



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460  
OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION  
OFFICE OF PESTICIDE PROGRAMS REGISTRATION DIVISION (7505P)

DP BARCODE No.: D433741; FILE SYMBOL No.: 87290-AU (screen); PRODUCT NAME: Willowood Pyrac 2EC; DECISION No.: 516911; PC Code(s): 099100; ACTION CODE: R301; FOOD Use: Yes

DATE OUT: June 1, 2016

SUBJECT: 45/90 day screen results for end use product "Willowood Pyrac 2EC"

FROM: Shyam Mathur,  
Product Chemistry Team Leader  
CITAB/RD (7505P)

TO: Craig Reeves / Tony Kish, RM 22  
Fungicide Branch / RD (7505P)

Company Name: Willowood LLC  
Active Ingredient(s): Pyraclostrobin (23.6%)  
MRID No(s): 49897101, 49897102 and 49897103

CONCLUSION:

**Deficiencies: No**

(if there are deficiencies they are indicated below each heading as Note 1, Note 2 Etc)

**Group A:** All required data submitted.

**Group B:** All required data submitted, except for the guidelines 830.6317 (storage stability) and 830.6320 (corrosion characteristics). The registrant stated that these two studies are in progress and the results will be submitted on completion.

**CSF:** Basic CSF (dated 05-02-2016) submitted

**DRAFT PRODUCT LABEL:** Submitted

Note to PM: Since the product was found to be incompatible with oxidizing agents, the registrant is recommended to add the following statement under Physical-Chemical Hazards on the product label:

"Do not mix or allow coming in contact with oxidizing agent. Hazardous Chemical reaction may occur"

Note to PM: If the deficiencies are found in the screen results, please inform the registrant and bring back to the author of this report the corrected deficiencies in response to 10 day letter. The corrected deficiencies will be attached to the original bean, if the data package is still in CITAB. New Bean is required in case the bean has been closed by CITAB. Thank you.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND  
POLLUTION PREVENTION

OFFICE OF PESTICIDE PROGRAMS  
REGISTRATION DIVISION

11/MAY/2016

SIMILARITY CLINIC MEMORANDUM

Subject: Name of Pesticide Product: Willowood Pyrac 2EC  
EPA Reg. No. /File Symbol: 87290-AU  
DP Barcode: D433454  
Decision No: 516911  
Action Code: R301  
PC Code: 099100 (pyraclostrobin)

From: Eugenia McAndrew, Biologist *Eugenia McAndrew*

Through: John C. Redden, M.S., Senior Risk Assessor *JCR*  
Chemistry, Inerts and Toxicology Assessment Branch  
Registration Division (7505P)

To: Tony Kish, Risk Manager Team 22  
Fungicide Branch  
Registration Division (7505P)

Applicant: Willowood, LLC  
1600 NW Garden Valley Blvd., Suite 120  
Roseburg, OR 97471

FORMULATION FROM LABEL:

<u>Active Ingredient(s):</u>	<u>% by wt.</u>
Pyraclostrobin	23.6
Other ingredients:	<u>76.4</u>
Total:	100.0

**ACTION REQUESTED:** Similarity determination for 87290-AU, proposed product, and 7969-186, cited product.

**BACKGROUND:** Willowood, LLC has applied for registration of Willowood Pyrac 2EC, EPA File Symbol 87290-AU, claiming to be substantially similar to Headline EC Fungicide, EPA Reg. No. 7969-186. Both products contain 23.6% pyraclostrobin. The submission includes a basic CSF dated May 2, 2016, label, data matrix and company letter.

The registrant is using the selective method of data support to satisfy the acute toxicity data requirements. The data matrix cites eighteen acute toxicity studies. We have reviewed these data citations and found that six of these studies were submitted to support the registration of the cited product. We will use the studies with MRIDs 451183-03, -06, -09, -12, -15 and -18 to support the proposed product, 87290-AU. The studies were reviewed and classified as acceptable in two Technical Review Branch/Registration Division memos (Redden; D275784; EPA File Symbol 7969-RIA; 30/JULY/2001 and Backus; D285393; EPA File Symbol 7969-RIA; 18/SEPT/2002).

**RECOMMENDATIONS:**

1. We compared the basic CSFs and labels of the proposed product, 87290-AU, and the cited product, 7969-186, and determined that the two products are substantially similar. The cited acute toxicity data may be used to support this registration.
2. The acute toxicity profile for the proposed product, Willowood Pyrac 2EC, EPA File Symbol 87290-AU, is as follows:

acute oral toxicity	II	cited	MRID 45118303
acute dermal toxicity	III	cited	MRID 45118306
acute inhalation toxicity	IV	cited	MRID 45118309
primary eye irritation	II	cited	MRID 45118312
primary skin irritation	II	cited	MRID 45118315
dermal sensitization	negative	cited	MRID 45118318

3. The proposed basic CSF submitted for 87290-AU must be reviewed and accepted by the product chemists in the Chemistry, Inerts and Toxicology Assessment Branch.

**LABELING:** Based on the toxicity profile above, the following are the precautionary and first aid statements for this product as obtained from the Label Review System:

**PRODUCT ID #:** 087290-00064

**PRODUCT NAME:** Willowood Pyrac 2EC

#### **PRECAUTIONARY STATEMENTS**

**SIGNAL WORD:** WARNING

**SPANISH SIGNAL WORD:** AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

**Hazards to Humans and Domestic Animals:**

Contains Petroleum Distillate.

May be fatal if swallowed. Causes skin irritation. Causes substantial but temporary eye injury. Harmful if absorbed through skin. Do not get in eyes, on skin or on clothing.

Wear coveralls over short-sleeved shirt and short pants, socks, chemical-resistant footwear, and chemical resistant gloves. Wear protective eyewear (goggles, face shield, or safety glasses).

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. When mixing and loading wear a chemical resistant apron. For overhead exposure wear chemical-resistant headgear. When cleaning equipment wear a chemical-resistant apron.

**First Aid:**

If swallowed:

- Call a poison control center or doctor immediately for treatment advice.
- Do not give any liquid to the person.
- Do not induce vomiting unless told to by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

If on skin:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

If in eyes:

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.
- Call a poison control center or doctor for treatment advice.

**Note to Physician:** Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-xxx-xxxx for emergency medical treatment information.



**User Safety Recommendations:**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change clothing.

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

401 M Street, S.W.  
WASHINGTON, D.C. 20460

**Paperwork Reduction Act Notice:** The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

## DATA MATRIX

Date **May 17, 2016**

EPA Reg. No./File Symbol 87290-AU

Page 1 of 5

Applicant's / Registrant's Name &amp; Address

Willowood, LLC  
1600 NW Garden Valley Blvd., Suite 120  
Roseburg, OR 97471

Product

Willowood Pyrac 2EC

Ingredient **Pyraclostrobin**

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.1550	Product Identity and Composition	49897101 ✓	Willowood, LLC	OWN	
830.1600	Description of Materials Used to Produce the Product	49897101	Willowood, LLC	OWN	
830.1620	Description of Production Process				Not required <sup>1</sup>
830.1650	Description of Formulation Process	49897101	Willowood, LLC	OWN	
830.1670	Discussion of Formation of Impurities	49897101	Willowood, LLC	OWN	
830.1700	Preliminary Analysis			OWN	Not required <sup>2</sup>
830.1750	Certified Limits	49897101	Willowood, LLC	OWN	
830.1800	Enforcement Analytical Method	49897101	Willowood, LLC	OWN	
830.6302	Color	49897102 ✓	Willowood, LLC	OWN	
830.6303	Physical State	49897102	Willowood, LLC	OWN	
830.6304	Odor	49897102	Willowood, LLC	OWN	
830.6313	Stability to Normal and Elevated Temperatures, Metals, and Metal Ions	49897103 ✓	Willowood, LLC		Not required <sup>3</sup>
830.6314	Oxidation/Reduction: Chemical Incompatibility	49897102	Willowood, LLC	OWN	

Signature



Name and Title

Michael Kellogg, Consultant

Date

May 17, 2016

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

401 M Street, S.W.

WASHINGTON, D.C. 20460

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## DATA MATRIX

Date <b>May 17, 2016</b>			EPA Reg. No./File Symbol 87290-AU		Page 2 of 6
Applicant's / Registrant's Name & Address  Willowood, LLC 1600 NW Garden Valley Blvd., Suite 120 Roseburg, OR 97471			Product Willowood Pyrac 2EC		
Ingredient <b>Pyraclostrobin</b>					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.6315	Flammability	49897102	Willowood, LLC	OWN	
830.6316	Explosibility	49897103	Willowood, LLC		Not required <sup>4</sup>
830.6317	Storage Stability	49897103	Willowood, LLC		PRN 92-5 <sup>5</sup>
830.6319	Miscibility	49897103	Willowood, LLC		Not required <sup>6</sup>
830.6320	Corrosion Characteristics	49897103	Willowood, LLC		See endnote <sup>5</sup>
830.6321	Dielectric Breakdown Voltage	49897103	Willowood, LLC		Not required <sup>7</sup>
830.7000	pH	49897102	Willowood, LLC	OWN	
830.7050	UV/Visible Absorption	49897103	Willowood, LLC		Not required <sup>3</sup>
830.7100	Viscosity	49897102	Willowood, LLC	OWN	
830.7200	Melting Point/Melting Range	49897103	Willowood, LLC		Not required <sup>3</sup>
830.7220	Boiling Point/Boiling Range	49897103	Willowood, LLC		Not required <sup>3</sup>
830.7300	Density/Relative Density/Bulk Density	49897102	Willowood, LLC	OWN	
830.7370	Dissociation Constants in Water	49897103	Willowood, LLC		Not required <sup>3</sup>

Signature



Name and Title

Michael Kellogg, Consultant

Date

May 17, 2016

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## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

401 M Street, S.W.  
WASHINGTON, D.C. 20460

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## DATA MATRIX

Date <b>May 17, 2016</b>	EPA Reg. No./File Symbol 87290-AU	Page 3 of 5
Applicant's / Registrant's Name & Address  Willowood, LLC 1600 NW Garden Valley Blvd., Suite 120 Roseburg, OR 97471		Product Willowood Pyrac 2EC

## Ingredient Pyraclostrobin

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.7520	Particle size, fiber length, diameter distribution	49897103	Willowood, LLC		Not required <sup>8</sup>
830.7550	Partition Coefficient (n-octanol/water), Shake Flask Method	49897103	Willowood, LLC		Not required <sup>3</sup>
830.7560	Partition Coefficient (n-octanol/water), Generator Column Method	49897103	Willowood, LLC		See 830.7550
830.7570	Partition Coefficient (n-octanol/water), Estimation by Liquid Chromatography	49897103	Willowood, LLC		See 830.7550
830.7840	Water Solubility: Column Elution Method; Shake Flask Method	49897103	Willowood, LLC		Not required <sup>3</sup>
830.7860	Water Solubility, Generator Column Method	49897103	Willowood, LLC		Not required <sup>3</sup>
830.7950	Vapor Pressure	49897103	Willowood, LLC		Not required <sup>3</sup>
870.1100 (81-1)	Acute Oral Toxicity: Rat	45118303 ✓	BASF Corporation	OLD	
870.1200 (81-2)	Acute Dermal Toxicity: Rat	45118306 ✓	BASF Corporation	OLD	
870.1300 (81-3)	Acute Inhalation Toxicity: Rat	45118309 ✓	BASF Corporation	OLD	
870.2400 (81-4)	Primary Eye Irritation: Rabbit	45118312 ✓	BASF Corporation	OLD	

Signature 	Name and Title Michael Kellogg, Consultant	Date May 17, 2016
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## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

401 M Street, S.W.

WASHINGTON, D.C. 20460

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## DATA MATRIX

Date <b>May 17, 2016</b>			EPA Reg. No./File Symbol <b>87290-AU</b>		Page <b>4</b> of <b>5</b>
Applicant's / Registrant's Name & Address <b>Willowood, LLC 1600 NW Garden Valley Blvd., Suite 120 Roseburg, OR 97471</b>			Product <b>Willowood Pyrac 2EC</b>		
Ingredient <b>Pyraclostrobin</b>					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
870.2500 (81-5)	Primary Dermal Irritation	45118315 ✓	BASF Corporation	OLD	
870.2600 (81-6)	Dermal Sensitization	45118318 ✓	BASF Corporation	OLD	
<b>Pyraclostrobin Generic Data Requirements</b>					
Willowood Pyrac 2EC qualifies for Formulator's Exemption for pyraclostrobin generic data requirements.					

Signature 	Name and Title <b>Michael Kellogg, Consultant</b>	Date <b>May 17, 2016</b>
---	--	-----------------------------

## Endnotes for Data Matrix for Willowood Pyrac 2EC

- 
- <sup>1</sup> **830.1620** - Per OPPTS 830.1000, these data are not required for the registration of an end-use product. See 830.1650 for formulation process information.
- <sup>2</sup> **830.1700** – This product does not consist solely of the technical grade active ingredient (TGAi) and is not produced by an integrated system, therefore, per OPPTS 830.1700, these data are not required.
- <sup>3</sup> **830.6313, 830.7050, 830.7200, 830.7220, 830.7370, 830.7550, 830.7560, 830.7570, 830.7840, 830.7860 and 830.7950** – Per OPPTS 830.1000, these data are not required for the registration of an end-use product.
- <sup>4</sup> **830.6316** – This product does not have explosive characteristics; therefore these data are not required. Please refer to the Confidential Statement of Formula for additional information on the composition of Willowood Pyrac 2EC.
- <sup>5</sup> **830.6317, 830.6320 – Storage Stability and Corrosion Characteristics:** Willowood, LLC is currently conducting storage stability and corrosion characteristic studies to satisfy guidelines 830.6317 and 830.6320, respectively. Per PR Notice 92-5, storage stability data are not required to be submitted unless specifically requested by the Agency. OPPTS 830.6317 and 830.6320 guidelines allow the corrosion characteristics study and storage stability study to be conducted simultaneously. Willowood, LLC will submit these data upon completion. Willowood, LLC requests that a conditional registration for Willowood Pyrac 2EC be granted on the submission of these data.
- <sup>6</sup> **830.6319** – Willowood Pyrac 2EC is an emulsifiable concentrate however, the proposed labeling recommends dilution with water, not oil; therefore, these data are not required.
- <sup>7</sup> **830.6321** – This product is not proposed for use around electrical equipment. Therefore, these data are not applicable nor are these data required.
- <sup>8</sup> **830.7520** - These data are not required for Willowood Pyrac 2EC because it is not water insoluble and is not a fibrous material.

**Memorandum****E-SUBMISSION**Date: 5 / 9 / 16To: PH 22, Regulatory Manager

From: Information Services Branch, ITRMD

Your receipt of this data submission is not an indication that MRIDs for the enclosed studies have been posted to OPPIN.

**We expect that it will be approximately 5 days from the above date before the study-level data is available in OPPIN.**

If you have any questions about this process, please contact Teresa Downs (305-5363).

This is a: ☒ fully accepted submission  
☐ partially accepted submission  
☐ rejected submission

*w/ sim. data?*

**PYXIS REGULATORY CONSULTING, INC.**

4110 136<sup>th</sup> St. Ct. NW  
Gig Harbor, WA 98332

Phone: 253-853-7369  
Fax: 253-853-5516  
Email: Mike@PyxisRC.com

**MRID 498971-00**

May 2, 2016

**ELECTRONIC SUBMISSION**

Tony Kish (PM 22)  
Document Processing Desk (**REGFEE**)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202-4501

RE: Willowood, LLC – Willowood Pyrac 2EC (EPA Reg. No. 87290- )  
Application for New Pesticide Registration

Dear Mr. Kish,

On behalf of Willowood, LLC please find the enclosed application for registration of Willowood Pyrac 2EC, an end-use product containing pyraclostrobin as the active ingredient. In support of this application, we submit the following documents:

1. Application for Registration (EPA Form 8570-1)
2. Receipt of PRIA pre-payment from pay.gov
3. Confidential Statement of Formula (Basic Formulation dated May 2, 2016)
4. Formulators Exemption Statement (EPA Form 8570-27)
5. One (1) copy of the proposed labeling
6. Certification with Respect to Citation of Data (EPA Form 8570-34)
7. Agency Internal Use Copy of the Data Matrix (EPA Form 8570-35)
8. Public File Copy of the Data Matrix (EPA Form 8570-35)
9. Letter of Authorization
10. Product Specific Data:

MRID	Guideline	Report Title
49897101	830.1550, 830.1600, 830.1650, 830.1670, 830.1750, 830.1800	Kellogg, M. Product Identity and Composition, Description of the Materials Used, Description of the Formulation Process, Discussion of the Formation of Impurities, Certified Limits, and Analytical Methods to Verify Certified Limits for Willowood Pyrac 2EC.
49897102	830.6302, 830.6303, 830.6304, 830.6314, 830.6315, 830.7000, 830.7100, 830.7300	Theus, S. Final Report for: Physical and Chemical Characteristics of Willowood Pyrac 2 EC.
49897103	830.6313, 830.6316, 830.6317, 830.6319, 830.6320, 830.6321, 830.7050, 830.7200, 830.7220, 830.7370, 830.7520, 830.7550-	Kellogg, M. Waiver Request for Certain Data Requirements for Willowood Pyrac 2EC.



	830.7570, 830.7840- 830.7860, 830.7950	
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Willowood, LLC believes its product, Willowood Pyrac 2EC, is substantially similar to a currently registered product (EPA Reg. No. 7969-186).

Willowood, LLC believes this application falls under Category R301 (45) since Willowood Pyrac 2EC is a new product, substantially similar in composition and use to a registered product, only product chemistry data are being submitted to support the application for registration and the selective method is being used to support product specific acute toxicity data requirements. In addition, the technical source of active ingredient is based on a registered source of supply and therefore, Willowood Pyrac 2EC qualifies for Formulators Exemption for pyraclostrobin generic data requirements.

We trust you will find this application complete and in compliance with the requirements for registration under FIFRA. Please feel free to call me if you have any questions or need any additional information.

Sincerely,



Michael Kellogg

Enclosures

cc: B. Heinze; Willowood, LLC



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
WASHINGTON, D.C. 20460

May 05, 2016

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

PYXIS REGULATORY CONSULTING, INC.  
WILLOWOOD, LLC  
4110 136TH ST. CT. NW  
GIG HARBOR, WA 98332

Report of Analysis for Compliance with PR Notice 11-03

Thank you for your submittal of 02-MAY-16. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your submittal was found to be in full compliance with the standards for submission of data contained in PR Notice 11-03. A copy of your bibliography is enclosed, annotated with Master Record ID's (MRIDs) assigned to each document submitted. Please use these numbers in all future references to these documents. Thank you for your cooperation. If you have any questions concerning this data submission, please raise them with the cognizant Product Manager, to whom the data have been released.

**PYXIS REGULATORY CONSULTING, INC.**

4110 136<sup>th</sup> St. Ct. NW  
Gig Harbor, WA 98332

Phone: 253-853-7369  
Fax: 253-853-5516  
Email: Mike@PyxisRC.com

**MRID 498971-00**

May 2, 2016

**ELECTRONIC SUBMISSION**

Tony Kish (PM 22)  
Document Processing Desk (**REGFEE**)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202-4501

RE: Willowood, LLC – Willowood Pyrac 2EC (EPA Reg. No. 87290- )  
Application for New Pesticide Registration

Dear Mr. Kish,

On behalf of Willowood, LLC please find the enclosed application for registration of Willowood Pyrac 2EC, an end-use product containing pyraclostrobin as the active ingredient. In support of this application, we submit the following documents:

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10. Product Specific Data:

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49897102	830.6302, 830.6303, 830.6304, 830.6314, 830.6315, 830.7000, 830.7100, 830.7300	Theus, S. Final Report for: Physical and Chemical Characteristics of Willowood Pyrac 2 EC.
49897103	830.6313, 830.6316, 830.6317, 830.6319, 830.6320, 830.6321, 830.7050, 830.7200, 830.7220, 830.7370, 830.7520, 830.7550-	Kellogg, M. Waiver Request for Certain Data Requirements for Willowood Pyrac 2EC.

	830.7570, 830.7840- 830.7860, 830.7950	
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Willowood, LLC believes its product, Willowood Pyrac 2EC, is substantially similar to a currently registered product (EPA Reg. No. 7969-186).

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We trust you will find this application complete and in compliance with the requirements for registration under FIFRA. Please feel free to call me if you have any questions or need any additional information.

Sincerely,



Michael Kellogg

Enclosures

cc: B. Heinze; Willowood, LLC

**21-Day Screen Completed by**  
**Contractor**

**21-Day Expires on** 5-23-16

**Jacket #** 87290-AU

**MRID#** 498971

**Content Screen:** Recommend to Pass/Fail

**11-3 Review:** Pass/Fail/NA

**Overall Status:** Recommend to Pass/Fail

**Transfer This Jacket to:**

STEPHEN SCHABBLE

# PRIA 3 – 21 Day Content Screen Review Worksheet

(EPA/OPP Use Only)

September 2012

21 Day Screen Start Date: 5-2-16

Experts In-Processing Signature: BB. Date 5-5-16 Fee Paid: Yes ☒

Division management contacted on issues No ☐ Yes ☐ Date \_\_\_\_\_

EPA Reg. Number: <u>87290-AU</u>		EPA Receipt Date: <u>5-2-16</u>			
Items for Review			Yes	No	N/A*
1	Application Form (EPA Form 8570-1) signed & complete including package type		<input checked="" type="checkbox"/>		
2	Confidential Statement of Formula all boxes completed, form signed, and dated (EPA Form 8570-4)		<input checked="" type="checkbox"/>		
	a) All <u>inerts</u> , including fragrances, approved for the proposed uses (see Footnote A)	yes <input checked="" type="checkbox"/> no <input type="checkbox"/>			
3	Certification with Respect to Citation of Data (EPA Form 8570-34) completed and signed (N/A if 100% repack)		<input checked="" type="checkbox"/>		
	Certificate and data matrix consistent		<input checked="" type="checkbox"/>		
	If applicant is relying on data that are compensable, is the offer to pay statement included. (see Footnote B)	yes <input type="checkbox"/> no <input type="checkbox"/>			
	If applicable, is there a letter of Authorization for exclusive use only.				
4	Formulator's Exemption Statement (EPA Form 8570-27) completed and signed (N/A if source is unregistered or applicant owns the technical)		<input checked="" type="checkbox"/>		
5	Data Matrix (EPA Form 8570-35) both internal and external copies (PR 98-5) completed and signed (N/A if 100% repack)		<input checked="" type="checkbox"/>		
	a) Selective Method (Fee category experts use)	yes <input checked="" type="checkbox"/> no <input type="checkbox"/>			
	b) Cite-All (Fee category experts use)	<input type="checkbox"/>			
	c) Applicant owns all data (Fee category experts use)	<input type="checkbox"/>			
6	5 Copies of <u>Label</u> (Electronic labels on CD are encouraged and guidance is available)		<input checked="" type="checkbox"/>		
7	Is the data package consistent with <u>PR Notice 86-5</u>		<input checked="" type="checkbox"/>		
8	Notice of Filing included with petitions				<input checked="" type="checkbox"/>

9	If applicable for conventional applications, <u>reduced risk rationale</u>			X
	<u>Required Data</u> and/or data waivers. See Footnote C.			
10	a) List study (or studies) not included with application			

**Comments:**

Documentation: Pass  
 - Required forms are complete

Inerts: Pass  
 - Inerts Approved for food use under 40 CFR 180.920, Pre-Harvest Application to Growing Crops.

PRN 11-3: Pass  
 - MRID: 498971  
 - Page 1 of 498971 has Confidential marking that must be removed. Emailed Agent Contact 5/6/16  
 - 5/9/16 - Agent Contact confirmed corrected study sent to Terese

Overall Status: Pass

SDM 5/9/16

\* N/A – Not Applicable

#### Footnotes

A. During the 21 day initial content review, all CSFs will be reviewed to determine whether all inerts listed, including fragrances, are approved for the proposed uses or have an application pending with the Agency. If an unapproved inert with no application pending with the Agency is identified, the applicant must either 1) resolve the inert issue by, for example, removing the inert, substituting it with an approved inert, submitting documentation that EPA approved the inert for the proposed pesticidal uses, correcting mistakes on the CSF, etc. or 2) provide the data to support OPP approval of the inert or 3) withdraw the application. Removing or substituting an inert ingredient will require a new CSF and may require submission of data. All information, forms, data and documentation resolving the inert issue must have been received by the Agency or the application withdrawn within the 21 day period, otherwise, the Agency will reject the application as described below.

To successfully complete this aspect of the 21 day initial content screen, applicants are **strongly encouraged** to verify that all inert ingredients have been approved for the application's uses or have an application pending with the Agency **even if a product is currently registered** by consulting the [inert Web site](#) and if the inert is not approved nor has an application pending with the Agency, to **obtain the necessary inert approval prior to submitting an application to register a pesticide product containing that inert ingredient**. Some inert ingredients are no longer approved for food uses or certain types of uses. The name and/or CAS number on a CSF must match the name and CAS number on this web site. Simple typographical errors in the name or CAS number have resulted in processing delays.

If an inert is not listed on the inert ingredient web site and the applicant believes that the inert has been approved, the applicant should contact the Inert Ingredient Assessment Branch (IIAB) at [inertsbranch@epa.gov](mailto:inertsbranch@epa.gov) and resolve the issue. Copies of the correspondence with IIAB resolving the issue should accompany the application. All new inerts except PIP inerts are reviewed by IIAB. The IIAB should also be contacted for any questions on what supporting data needs to be submitted for and the Agency's inert review process. Questions on PIP inerts should be directed to the [Chief of Microbial Pesticides Branch](#).

When a brand, trade, or proprietary name of an inert ingredient is listed on a CSF, additional information such as an alternate name of the inert, CAS number or other information must also be included to enable the Agency to determine if it has been approved. Each component of an inert mixture (including a fragrance) must be identified. In some cases, the supplier of the mixture or fragrance may need to provide this information to the Agency. Prior to the Agency's receipt of an application, applicants must arrange with a proprietary mixture or fragrance supplier to provide the component information to the Agency or promptly upon EPA's request. If the inert ingredients in a proprietary blend (including fragrances) cannot or are not identified or provided within the 21-day content review period, the Agency will reject the application.



During the 21 day content review, applicants should submit information to the individual identified by the Agency when the applicant is informed of an unapproved inert.

#### **Unapproved Inerts Identified on CSFs**

##### **All applications except conventional new products and PIPs**

Once an unapproved inert is identified on a CSF, the Agency will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the inert's identity or CAS number, providing documentation that the inert has been approved, or removing the unapproved inert from the CSF or replacing it with one that is approved for the application's uses; or
2. Provide the required information necessary to identify an inert approval application that is pending with the Agency; or
3. Submit the information and data needed for the Agency to approve the unapproved inert. If this option is selected and implemented, the Agency may request an extension in the PRIA decision review timeframe to accommodate the inert review/approval process;
4. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of these options is selected and implemented by the applicant within the 21 day content review period, the Agency will reject the application and retain 25% of the full fee of the category identified.

##### **Conventional New Product Applications**

When the Registration Division identifies an unapproved inert on a CSF with an application for a new product that the applicant has not identified as requiring an inert approval (R300 or R301), it will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the inert's identity or CAS number, providing documentation that the inert has been approved, or removing the unapproved inert from the CSF or replacing it with one that is approved for the application's uses; or
2. Submit the information and data needed for the Agency to approve the unapproved inert, including any required petition to establish or amend a tolerance or exemption from a tolerance. (This option may change the PRIA category for the application, which could require a longer decision review time and a larger fee. If additional fees are due, they must be received by the Agency within the 21 day content review period.)

3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21-day content-review period, the Agency will reject the application and retain 25% of the appropriate fee for the new product-inert approval category.

#### PIP Applications

When the Biopesticide and Pollution Prevention Division identifies an unapproved inert on a PIP CSF and a request to approve the inert does not accompany the application, it will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the spelling or name of the inert to that in 40 CFR 174, or providing documentation that the inert has been approved; or
2. Submit the information and data needed for the Agency to approve the unapproved inert. If an inert ingredient tolerance exemption petition is required, the petition must be received by the Agency and the B903 fee paid within the 21 day period. If this option is selected and implemented, the Agency will discuss harmonizing the timeframe for both actions.
3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21 day content review period, the Agency will reject the application and retain 25% of the fee.

B. A policy on documentation of offers to pay is still being developed, however, for a me-too or fast track (similar/identical) new product, R300 or A530, an application without the necessary authorizations of offers to pay will be placed into either R301 or A531. The Agency recommends that authorizations of offers to pay be submitted with other PRIA applications to avoid delays in the Agency's decision.

C. Biopesticide applicants are advised to contact the Agency and discuss study waivers prior to submitting their application to the Agency. Documentation of such discussions should be submitted with the study waiver.

## Mattingly, Sean

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**From:** Mike Kellogg <Mike@PyxisRC.com>  
**Sent:** Friday, May 06, 2016 2:50 PM  
**To:** Mattingly, Sean  
**Cc:** Ashe, Anthony  
**Subject:** RE: Submission to EPA: Willowood Pyrac 2EC (EPA Reg. No. 87290-AU)

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

My apologies Sean. I'll send a corrected study to Teresa.

Regards,  
Mike Kellogg  
Pyxis Regulatory Consulting, Inc.  
4110 136<sup>th</sup> St. Ct. NW  
Gig Harbor, WA 98332  
T: 253-853-7369  
F: 253-853-5516

---

**From:** Mattingly, Sean [mailto:Mattingly.Sean@epa.gov]  
**Sent:** Friday, May 06, 2016 6:25 AM  
**To:** Mike Kellogg  
**Cc:** Ashe, Anthony  
**Subject:** Submission to EPA: Willowood Pyrac 2EC (EPA Reg. No. 87290-AU)

Dear Michael Kellogg,

My name is Sean Mattingly and I am a contractor with the EPA. I am contacting you in regards to your submissions in support of the product **Willowood Pyrac 2EC (EPA Reg. No. 87290-AU)**. We have found few deficiencies with the submissions that will need to be addressed:

1. For MRID **49897101** "Product Identity and Composition, Description of the Materials Used, Description of the Formation of Impurities, Certified Limits, and Analytical Methods to Verify Certified Limits for Willowood Pyrac 2EC":
  - a. When data confidentiality is claimed under FIFRA 10(d)(1)(A), (B), or (C), all confidential information must be excised from the body of the study and placed in a confidential attachment. **\*Please remove the confidential marking from page 1.\***

Please submit the necessary forms and revised studies in pdf file form to Teresa Downs by CD submission. If you have any questions, please do not hesitate to contact me.

Thank you,

Sean Mattingly

Contractor, US EPA  
2777 S. Crystral Drive, S-4822  
Arlington, VA 22202  
703-347-0501

Email: [mattingly.sean@epa.gov](mailto:mattingly.sean@epa.gov)

## R 300 and 301

100% identical (repack): YES or NO (circle one)

{If **yes**, it's a 100% repack - then product chemistry, acute toxicity and efficacy data are not required}

Data on Group A and B must be submitted - Group A and B can not be cited.

Guideline No.	Group A: Product Chemistry Data Study Title	Data submitted	
		Yes	No
830.1550	Product Identity & Composition	X	
830.1600	Description of materials used to produce the product	X	
830.1650	Description of formulation process	X	
830.1670	Discussion on the formation of impurities	X	
830.1700	Preliminary analysis	X	
830.1750	Certified limits (158.345)	X	
830.1800	Enforcement analytical method	X	

Guideline No.	Group B: Product Chemistry Data Study Title	Data submitted	
		Yes	No
830.6302	Color	X	
830.6303	Physical State	X	
830.6304	Odor	X	
830.6314	Oxidation/Reduction (Chemical incompatibility)	X	
830.6315	Flammability	X	
830.6316	Explodability	X	
830.6317	Storage stability	X	
830.6319	Miscibility	X	
830.6320	Corrosion Characteristics	X	
830.6321	Dielectric Breakdown voltage	X	
830.7000	pH	X	
830.7100	Viscosity	X	
830.7300	Density	X	

## R 300 and 301

New products must provide a bridging rationale document. The bridging document directs OPP to use a currently registered set of 6 acute toxicity data and label; instead of submitting product specific data.

Guideline No.	Acute toxicity (6 pack) Study Title	Cited	
		Yes	No
870.1100	Acute Oral (LD50)	X	
870.1200	Acute Dermal (LD50)	X	
870.1300	Acute Inhalation (LC50)	X	
870.2400	Acute Eye Irritation	X	
870.2500	Acute Dermal Irritation	X	
870.2600	Dermal Sensitization	X	

Efficacy – which guideline depends on the proposed label use and they must cite the data to be used for the bridging rationale.

Guideline No.	Efficacy Study Titles	Cited		Comments
		Yes	No	
810.3100	Soil Treatments for Imported Fire Ants			N/A
810.3200	Livestock, Poultry, Fur and Wool-Bearing Animal Treatments			N/A
810.3300	Treatments to Control Pests of Humans and Pets			N/A
810.3400	Mosquito, Black Fly, and Biting Midge (Sand Fly) Treatments			N/A
810.3500	Premises Treatments			N/A
810.3600	Structural Treatments			N/A
810.3800	Methods for Efficacy Testing of Termite Baits			N/A



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

May 4, 2016

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

OPP Decision Number: D-516911  
EPA File Symbol or Registration Number: 87290-AU  
Product Name: Willowood Pyrac 2EC  
EPA Receipt Date: 02-May-2016  
EPA Company Number: 87290  
Company Name: WILLOWOOD, LLC

MICHAEL KELLOGG  
AGENT FOR: WILLOWOOD, LLC  
PYXIS REGULATORY CONSULTING, INC.  
4110 136TH ST. CT., NW  
GIG HARBOR, WA 98332

SUBJECT: Receipt of Registration Application Subject to Registration Service Fee

Dear Registrant:

The Office of Pesticide Programs has received your application and certification of payment. If you submitted data with this application, the results of the PRN-2011-3 screen will be communicated separately. During the administrative screen, the Office of Pesticide Programs has determined that this Action is subject to a Pesticide Registration Service Fee as defined in the Pesticide Registration Improvement Act.

The Action has been identified as Action Code: R301  
NEW PRODUCT; IDENTICAL OR SUBSTANTIALLY SIMILAR IN COMPOSITION AND  
USE TO A REGISTERED PRODUCT; REGISTERED SOURCE OF ACTIVE  
INGREDIENT; SELECTIVE DATA CITATION ONLY FOR DATA ON PRODUCT  
CHEMISTRY / ACUTE TOXICITY / PUBLIC HEALTH PEST EFFICACY, WHERE  
APPLICANT DOES NOT OWN ALL REQUIRED DATA NOR HAS AUTHORIZATION  
LETTER FROM DATA OWNER;

No additional payment is due at this time.

If you have any questions, please contact the Pesticide Registration Service Fee  
Ombudsman at (703) 308-9362.

Sincerely,

*Peresa Downs*  
Front End Processing Staff

Information Technology & Resources Management Division

**Fee for Service**

<sup>W</sup> {985647R~

This package includes the following

☒ New Registration

☐ Amendment

☒ Studies? ☐ Fee Waiver?

☐ volpay % Reduction: \_\_\_\_

for Division

☐ AD

☐ BPPD

☒ RD

Risk Mgr.

22

Receipt No.

S- 985647

EPA File Symbol/Reg. No.

87290-AU

Pin-Punch Date:

5/2/2016

☐ This item is NOT subject to FFS action.

Action Code:

Requested: R301

Granted: R301

Amount Due: \$ 1,887

Parent/Child Decisions:

☐ Inert Cleared for Intended Use

☐ Uncleared Inert in Product

Reviewer: Fateh Sw

Date: 5-4-16

Remarks:

\*similarity clinic

DOCUMENTUM



Receipt for Section 3

S: 985647

Milestone Email: Mike@PyxisRC.com

Regulatory Type: Product Registration - Section 3

Resubmission ☐ Yes ☒ No

Application Type: New Registration

Fee For Service: ☒ Yes ☐ No

Company: 87290 WILLOWOOD, LLC

Billable: ☒ Yes ☐ No



Print Letter

Enter More Information

Tracking

Risk Manager: Registration Division, Risk Management Team 22

Product #: 87290-AU

Product Name: Willowood Pyrac 2EC

Override#

Me Too  
Section3: 7969-186

Me Too Product  
Name: HEADLINE FUNGICIDE

Application Date: 02-May-2016

OPP Rec'd Date: 02-May-2016

Front End Date: 03-May-2016

Risk Manager Send Date:

FFS Due Date:

Negotiated Due Date:

OPP Target Date:

Fast Track ☐

New Ingredient: ☐

Receipt Description:

Portal submission pkg# 11354. New product registration similar in composition and use to reg# 7969-186

Receipt Content

Study

CSF

View/Edit

Form A ☐ Signature Date

Form B ☐ Signature Date

New Ingredient  
Request Date  
New Ingredient  
Received Date

DOCUMENTUM



## Receipt

### Your payment is complete

Pay.gov Tracking ID: 25RCVU1O

Agency Tracking ID: 75007877068

Form Name: Pesticide Registration Improvement Act - Prepayment

Application Name: PRIA Service Fees

### Payment Information

Payment Type: Debit or credit card

Payment Amount: \$1,897.00

Transaction Date: 05/02/2016 06:05:09 PM EDT

Payment Date: 05/02/2016

Registration Number: 87290-xx

Company Name: Willowood, LLC

Company Number: 87290

Action Code: R301

### Account Information

Cardholder Name: Brian Heinze

Card Type: Master Card

Card Number: \*\*\*\*\*3276

### Email Confirmation Receipt

Confirmation Receipts have been emailed to:

mike@pyxisRC.com

DOCUMENTUM



United States  
Environmental Protection Agency  
Washington, DC 20460

☒ Registration  
☐ Amendment  
☐ Other

OPP Identifier Number

## Application for Pesticide - Section I

1. Company/Product Number 87290-	2. EPA Product Manager T. Kish	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Willowood, LLC / Willowood Pyrac 2EC	PM# 22	
5. Name and Address of Applicant (Include ZIP Code) Willowood, LLC c/o Pyxis Regulatory Consulting, Inc. 4110 136th St. Ct. NW Gig Harbor, WA 98332  <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. 7969-186 Product Name Headline Fungicide	

## Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input checked="" type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

This application falls under Category R301 (45) as it is a new product substantially similar in composition and use to a registered product, only product chemistry data are being submitted and the selective method of data support is being used to support product specific acute toxicity data requirements. The fee due is \$1897.00 and the decision timeline is 4 months. A receipt of PRIA pre-payment from pay.gov is included with this application. Should you have any questions, please contact me at (email) Mike@PyxisRC.com or (phone) 253-853-7369.

## Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input checked="" type="checkbox"/> Metal	
* Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	<input type="checkbox"/> Plastic	
		If "Yes" Package wgt	No. per container	<input type="checkbox"/> Glass	
				<input type="checkbox"/> Paper	
				<input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1, 2.5, 30, 265 gallons		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input type="checkbox"/> Other _____			

## Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)					
Name Michael Kellogg		Title Agent		Telephone No. (Include Area Code) (253) 853-7369	
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.					6. Date Application Received (Stamped)
2. Signature 		3. Title Agent		DOCUMENTUM	
4. Typed Name Michael Kellogg		5. Date May 2, 2016			

**PYXIS REGULATORY CONSULTING, INC.**

4110 136<sup>th</sup> St. Ct. NW  
Gig Harbor, WA 98332

Phone: 253-853-7369  
Fax: 253-853-5516  
Email: Mike@PyxisRC.com

**MRID 498971-00**

May 2, 2016

**ELECTRONIC SUBMISSION**

Tony Kish (PM 22)  
Document Processing Desk (**REGFEE**)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202-4501

RE: Willowood, LLC – Willowood Pyrac 2EC (EPA Reg. No. 87290- )  
Application for New Pesticide Registration

Dear Mr. Kish,

On behalf of Willowood, LLC please find the enclosed application for registration of Willowood Pyrac 2EC, an end-use product containing pyraclostrobin as the active ingredient. In support of this application, we submit the following documents:

1. Application for Registration (EPA Form 8570-1)
2. Receipt of PRIA pre-payment from pay.gov
3. Confidential Statement of Formula (Basic Formulation dated May 2, 2016)
4. Formulators Exemption Statement (EPA Form 8570-27)
5. One (1) copy of the proposed labeling
6. Certification with Respect to Citation of Data (EPA Form 8570-34)
7. Agency Internal Use Copy of the Data Matrix (EPA Form 8570-35)
8. Public File Copy of the Data Matrix (EPA Form 8570-35)
9. Letter of Authorization
10. Product Specific Data:

MRID	Guideline	Report Title
49897101	830.1550, 830.1600, 830.1650, 830.1670, 830.1750, 830.1800	Kellogg, M. Product Identity and Composition, Description of the Materials Used, Description of the Formulation Process, Discussion of the Formation of Impurities, Certified Limits, and Analytical Methods to Verify Certified Limits for Willowood Pyrac 2EC.
49897102	830.6302, 830.6303, 830.6304, 830.6314, 830.6315, 830.7000, 830.7100, 830.7300	Theus, S. Final Report for: Physical and Chemical Characteristics of Willowood Pyrac 2 EC.
49897103	830.6313, 830.6316, 830.6317, 830.6319, 830.6320, 830.6321, 830.7050, 830.7200, 830.7220, 830.7370, 830.7520, 830.7550-	Kellogg, M. Waiver Request for Certain Data Requirements for Willowood Pyrac 2EC.

**DOCUMENTUM**

	830.7570, 830.7840- 830.7860, 830.7950	
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Willowood, LLC believes its product, Willowood Pyrac 2EC, is substantially similar to a currently registered product (EPA Reg. No. 7969-186).

Willowood, LLC believes this application falls under Category R301 (45) since Willowood Pyrac 2EC is a new product, substantially similar in composition and use to a registered product, only product chemistry data are being submitted to support the application for registration and the selective method is being used to support product specific acute toxicity data requirements. In addition, the technical source of active ingredient is based on a registered source of supply and therefore, Willowood Pyrac 2EC qualifies for Formulators Exemption for pyraclostrobin generic data requirements.

We trust you will find this application complete and in compliance with the requirements for registration under FIFRA. Please feel free to call me if you have any questions or need any additional information.

Sincerely,



Michael Kellogg

Enclosures

cc: B. Heinze; Willowood, LLC

